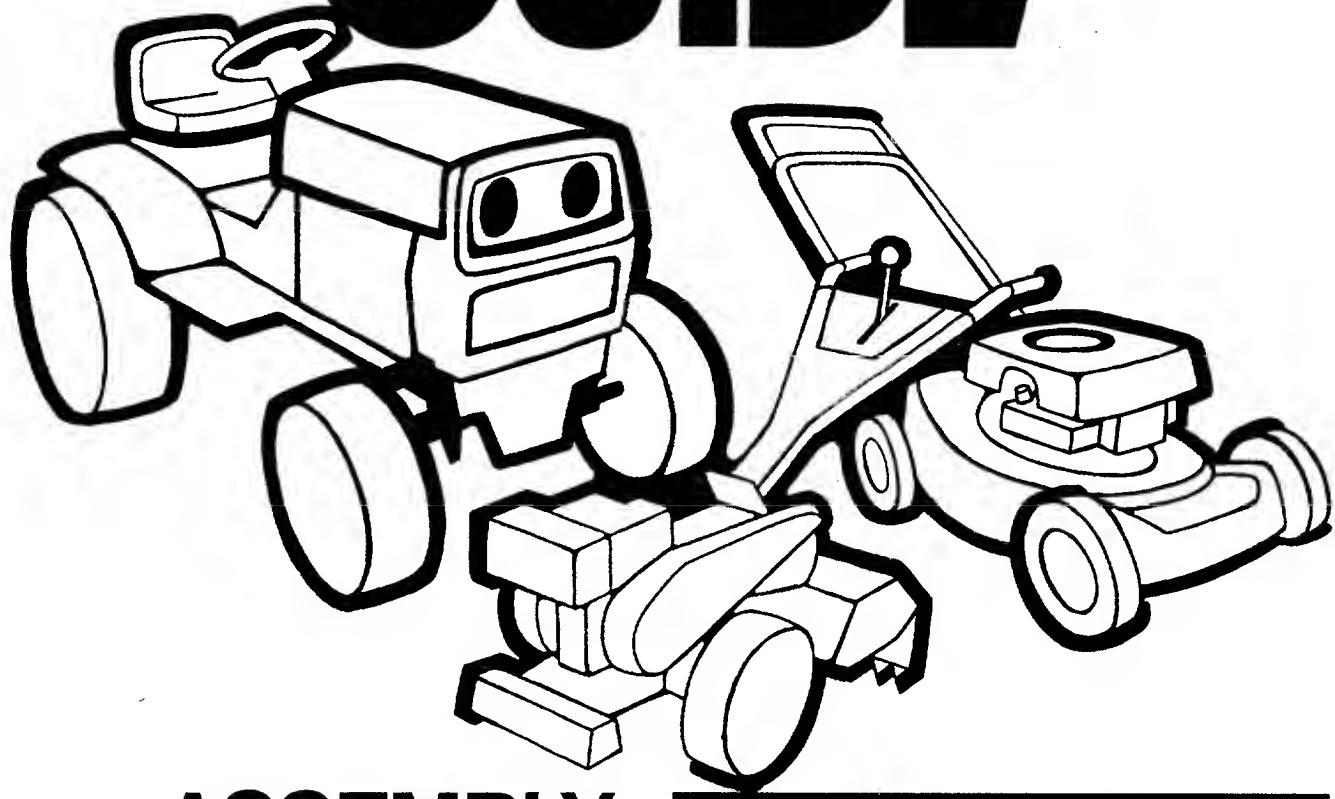


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OWNER'S GUIDE



**ASSEMBLY
OPERATION
MAINTENANCE
PARTS LIST**

**IMPORTANT:
Read Safety Rules
and Instructions**

**MODEL NUMBER
140-830A
18 H.P.
GARDEN
TRACTOR**

**NOTE
OPTIONAL 44" DECK
MODEL NO. 190-935A
AVAILABLE**

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LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.



TO PURCHASERS OF INTERNAL COMBUSTION ENGINE EQUIPPED MACHINE OR DEVICES IN THE STATE OF CALIFORNIA

The equipment which you have just purchased does not have a spark arrester. If this equipment is used on any forest covered land, brush covered land, or grass covered unimproved land in the State of California, before using on such land, the California law requires that a spark arrester be provided. In addition, spark arrester is required by law to be in effective working order. The spark arrester must be attached to the exhaust system and comply with Section 4442 of the California Public Resources Code.

► **IMPORTANT**

It is suggested that this manual be read in its entirety before attempting to assemble or operate. Keep this manual in a safe place for future reference and for ordering replacement parts.

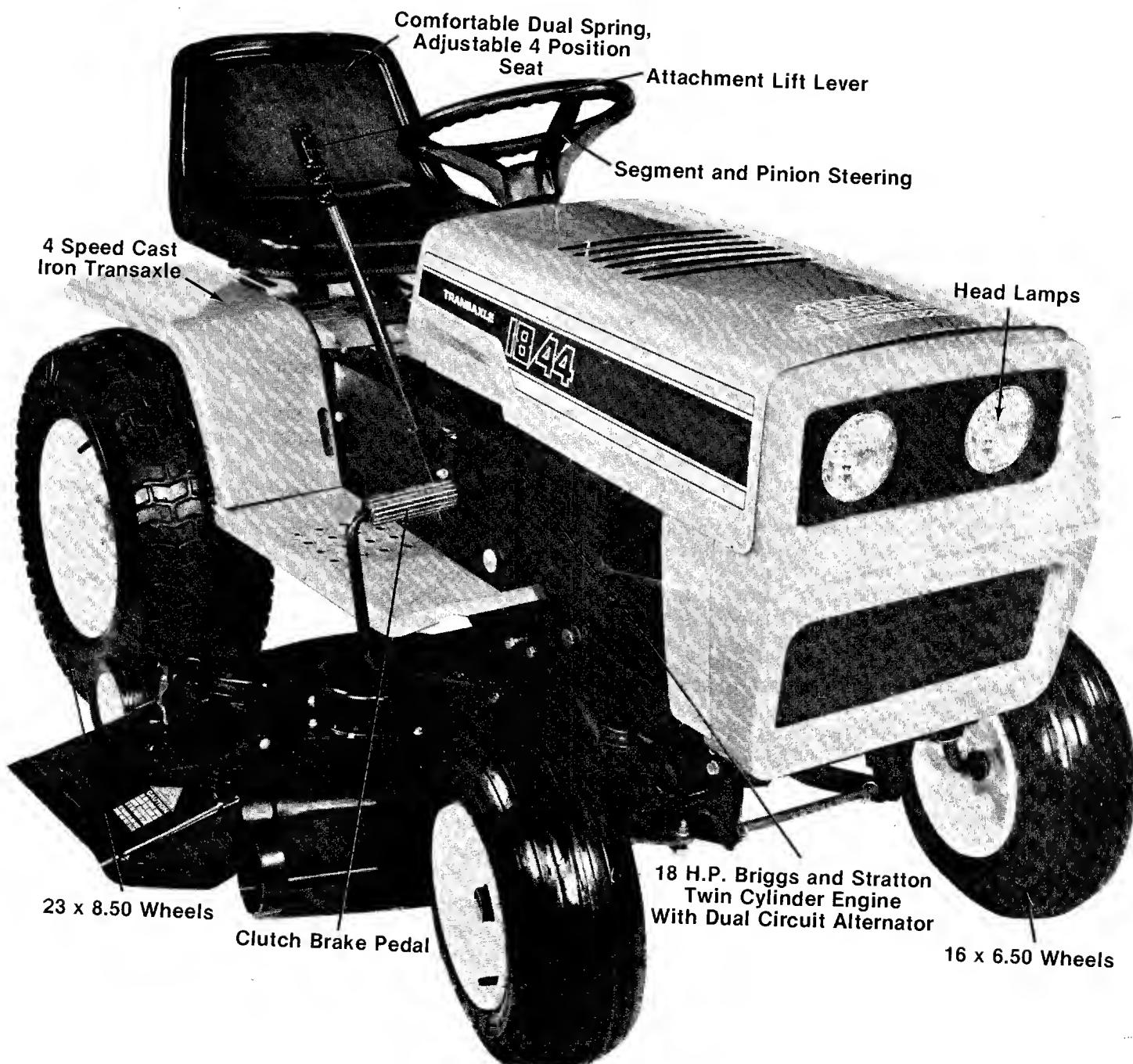
This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see operating section of this manual for proper fuel and amount.

This unit is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.

SAFE OPERATION PRACTICES FOR RIDING VEHICLES

1. Know the controls and how to stop quickly—**READ THE OWNER'S MANUAL.**
2. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
3. Do not carry passengers
4. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of foreign objects, a small object may have been overlooked and could be accidentally thrown by the mower in any direction.
5. Clear work area of objects which might be picked up and thrown by the mower in any direction.
6. Disengage all attachment clutches and shift into neutral before attempting to start engine.
7. Disengage power to attachment(s) and stop engine before leaving operating position.
8. Disengage power to attachment(s) and stop engine before making any repairs or adjustments. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
9. Before attempting to unclog the mower or discharge chute, stop the engine and be sure the blade(s) have stopped completely. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
10. Disengage power to attachment(s) when transporting or not in use.
11. Take all possible precautions when leaving vehicle unattended such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
12. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face.
13. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
14. Stay alert for holes in terrain and other hidden hazards.
15. Use care when pulling loads or using heavy equipment.
 - A. Use only approved drawbar hitch points.
 - B. Limit loads to those you can safely control.
 - C. Do not turn sharply. Use care when backing.
16. Use counterweight(s) or wheel weights when suggested in owner's manual.
17. Watch out for traffic when crossing or near roadways.
18. Handle gasoline with care. It is highly flammable.
 - A. Use approved gasoline container.
 - B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline.
 - C. Open doors if engine is run in garage. Exhaust fumes are dangerous. Do not run engine indoors.
19. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in owner's manual.
20. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
21. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
22. To reduce fire hazard, keep engine free of grass, leaves or excessive grease.
23. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object. The damage should be repaired before restarting and operating the equipment.
24. Do not change the engine governor settings or overspeed the engine.
25. When using the vehicle with mower, proceed as follows:
 - (1) Mow only in daylight or in good artificial light.
 - (2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
 - (3) Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher.
 - (4) Check blade mounting bolts for proper tightness at frequent intervals.
26. Check grass catcher bags frequently for wear or deterioration. For safety protection, replace only with new bag meeting original equipment specifications.
27. Look behind to make sure the area is clear before placing the transmission in reverse and backing up.

KNOW YOUR TRACTOR



ASSEMBLY

The Garden Tractor is packed and shipped in one container and is fully assembled except for the steering wheel, seat, battery and mounting the cutting deck.

BATTERY INFORMATION



WARNING

- A. Battery acid must be handled with great care as it will blister the skin and damage clothing. It is advisable to wear goggles, rubber gloves, and a protective apron when working with it.
- B. If for any reason acid should be spattered in the eyes, wash it out immediately with clean cold water. Seek medical aid if discomfort continues.
- C. If acid gets on clothes, dilute it with clean water first, then neutralize with dilute ammonia water or a water solution of baking soda.
- D. Since battery acid is corrosive to metals, do not pour into any sink or drain. Rinse empty electrolyte containers and mutilate before discarding.



DANGER

BATTERIES CONTAIN SULFURIC ACID AND MAY CONTAIN EXPLOSIVE GASES (when electrolyte has been added)

- A. Keep sparks, flame, cigarettes away.
- B. Hydrogen gas is generated during charging and discharging.
- C. Ventilate when charging or using in enclosed space.
- D. When using a charger—to avoid sparks, NEVER connect or disconnect charger clips to battery while charger is turned on.
- E. Always shield eyes and protect skin and clothing when working near batteries.

ACTIVATING THE BATTERY



NOTE

If your battery is activated (electrolyte in the battery) and installed in the unit, go directly to step 9.

1. Place the battery to be filled on a workbench. Never activate a battery in the unit.
2. Remove the fill caps from all cells.
3. Fill each cell carefully using 1.265 specific gravity electrolyte. Fill each cell to the top of the separators. Do not overfill.
4. Let the battery sit for 20 minutes to allow the chemical reaction to take place.
5. Charge the battery at a MAXIMUM RATE OF 5 AMPS. until the specific gravity reads 1.265. Use a hydrometer to check the specific gravity.



CAUTION

An excessive rate of charge will damage the battery.

6. Check the level of electrolyte. Adjust level to bottom of split ring if necessary with electrolyte.
7. Replace fill caps.
8. Once the battery has been activated, never add anything except distilled water or a good grade of drinking water.
9. If your battery has been installed in your unit at the factory:
 - A. Use a hydrometer to check the specific gravity. The specific gravity should be 1.265 at 80° F.
 - B. If it is less, remove the fill caps and use a battery charger to bring the specific gravity up to 1.265. NEVER CHARGE AT MORE THAN 5 AMPS.
 - C. Replace the fill caps.
 - D. The positive cable has been attached to the positive terminal of the battery at the factory. You only have to attach the negative cable (grounded to the negative (Neg, N or -) terminal of the battery with a hex head bolt, lock washer and nut.

MAINTENANCE OF BATTERY

1. Check electrolyte level periodically (at least every two weeks). Keep the level to the split rings. Use only distilled water or a good quality drinking water. Never add acid or any other chemicals to the battery after initial activation.
2. The battery should be checked with a hydrometer after every 25 hours of operation. If the specific gravity is less than 1.225, the battery should be recharged. Maximum charge rate 5 AMPS.

3. Coat the terminals and exposed wire with a thin coat of grease or petroleum jelly for longer service and protection against corrosion.
4. The battery should be kept clean. Any deposits of acid should be neutralized with soda and water. Be careful not to get this solution in the cells.
5. Avoid tipping the battery. Even a "sealed" battery will leak electrolyte when tipped.

STORAGE OF THE BATTERY

1. Store the battery in the unit.
2. Keep the exterior of the battery clean, especially the top. A dirty battery will discharge itself.
3. Check the battery with a hydrometer. The battery must be stored with a full charge. A discharged battery will freeze.

Specific Gravity	Freezing Point
1.265	-71° F.
1.250	-62° F.
1.200	-16° F.
1.150	5° F.
1.100	16° F.

CAUTION

All batteries discharge during storage.

4. Recharge battery whenever the specific gravity is less than 1.225, before returning to service or every two months, whichever comes first.

COMMON CAUSES FOR BATTERY FAILURE

1. Overcharging
2. Undercharging
3. Lack of water
4. Loose hold downs and/or corroded connections.
5. Excessive loads
6. Battery electrolyte substitutes
7. Freezing of electrolyte

NOTE

These failures do not constitute warranty.

BATTERY REMOVAL OR INSTALLATION



When removing the battery, follow this order of disassembly to prevent your wrench from shorting against the frame.

1. Remove the Negative cable.
2. Remove the Positive cable.

To install a battery:

1. Attach the Positive cable.
2. Attach the Negative cable.

JUMP STARTING

1. Attach the first jumper cable from the Positive terminal of the good battery to the Positive terminal of the dead battery.
2. Attach the second jumper cable from the Negative terminal of the good battery to the FRAME OF THE UNIT WITH THE BATTERY.



Failure to use this starting procedure could cause sparking, and the gases in either battery could explode.

INSTALLING THE BATTERY

Installing the Battery



The positive battery terminal is marked Pos. (+). The negative battery terminal is marked Neg. (-).

1. Place the battery in the battery box with the terminals towards the rear of the tractor.
2. Secure the battery with the two hold down rods, battery hold down, lock washers and wing nuts. See figure 1.

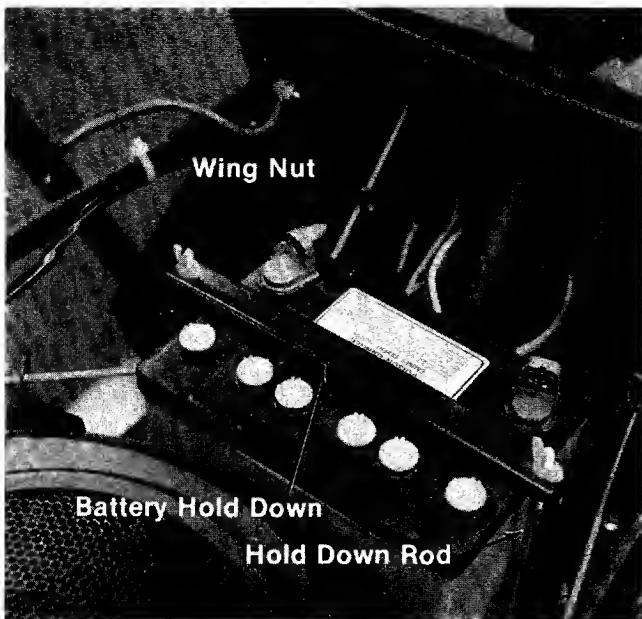


FIGURE 1.

3. Attach the positive cable (from the starter solenoid) and the small wire (from the circuit breaker) to the positive battery terminal (+) with a 1/4-20 x 3/4" long bolt, lock washer and hex nut.
4. Attach the negative cable (grounded) to the negative battery terminal (-) with the other 1/4-20 x 3/4" long bolt, lock washer and hex nut.

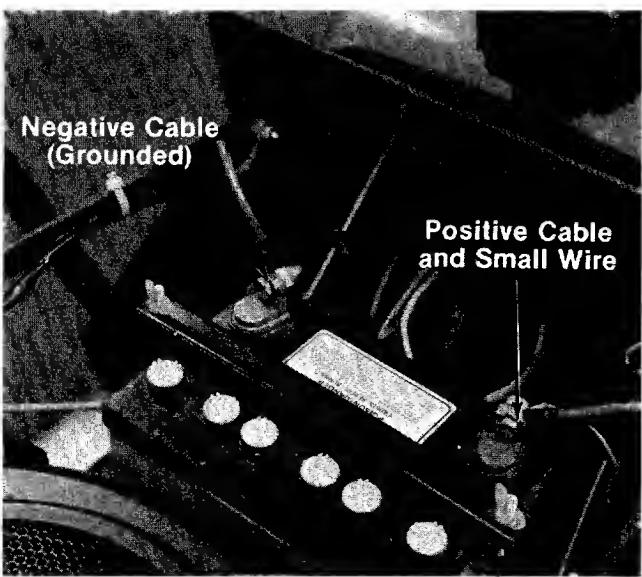


FIGURE 2.



The vented battery allows any gases or liquid from the battery to be carried to the rear of the tractor and onto the ground.

SEAT ASSEMBLY

The seat can be adjusted to four positions. With the seat tipped forward, hook the front of the seat spring into the slots on the tractor frame. Allow the seat to pivot backwards until it rests on the rear of the springs. (See figure 3.)

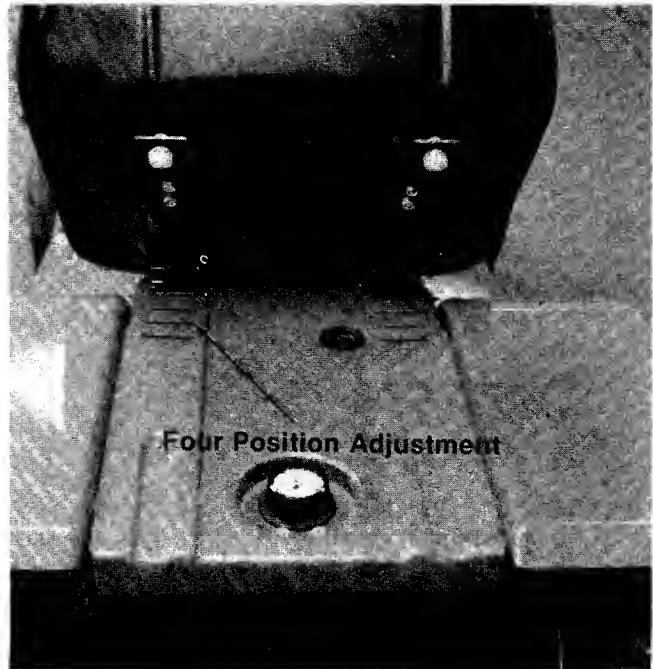


FIGURE 3.

STEERING WHEEL

1. Place the steering wheel over the steering column extending through the dash. Line up the flats on the steering column with the flats in the steering wheel. (See figure 4.)

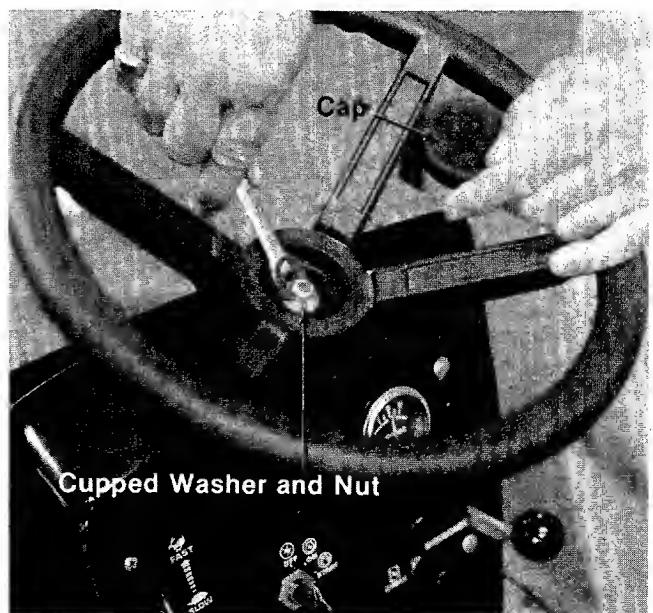


FIGURE 4.

2. Place the washer with the cupped side down over the steering column and secure with a hex nut 5/16".
3. Place the cap over the center of the steering wheel and seat it with your hand.

TIRE PRESSURE

The tires have been over-inflated for shipping. Reduce the rear wheel tire pressure to 15 p.s.i. for operation. Equal tire pressure should be maintained on all tires. Maximum tire pressure is 30 p.s.i.

ATTACHING THE CUTTING DECK

(Deck may be optional.)

Deck Assembly Screw Pack

- 4 Flat Washers 1/2" I.D.
- 1 Small Cotter Hairpin
- 4 Medium Cotter Hairpins
- 2 Large Cotter Hairpins
- 2 Deck Wheels
- 2 Shoulder Bolts
- 2 Belleville Washers

1. Assemble the deck wheels. Place wheel on the shoulder bolt, then the belleville washer (crown side against the wheel). Secure to wheel pivot bar, using a 3/4" wrench. See illustration on page 32.
2. Remove the round belt keeper from the idler by removing the cotter hairpin. (See figure 5.)
3. Unscrew the "L" bolt and swing the wire belt guard on the engine pulley forward.

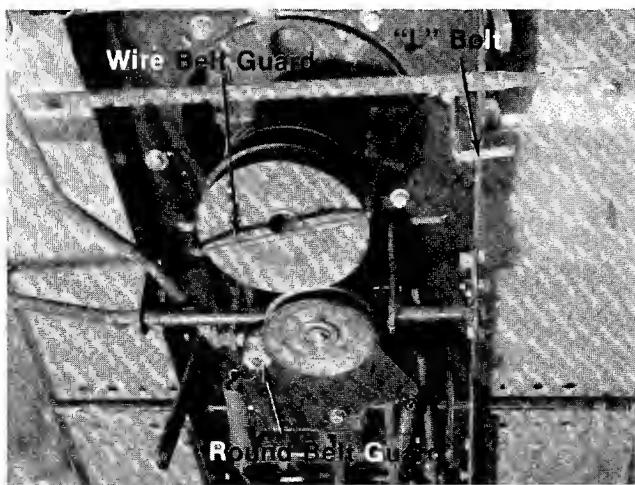


FIGURE 5.

4. Adjust the deck wheels to their lowest cutting position.
5. Move the tractor lift handle all the way back to the full raised position.
6. Turn the tractor steering wheel all the way to the left.

7. Slide the deck under the tractor from the left side.
8. Attach the four tractor hanger brackets to the deck with four 1/2" I.D. washers and four medium cotter hairpins. (See figure 6.)



The left front tractor hanger bracket goes through the center of the V-belt.

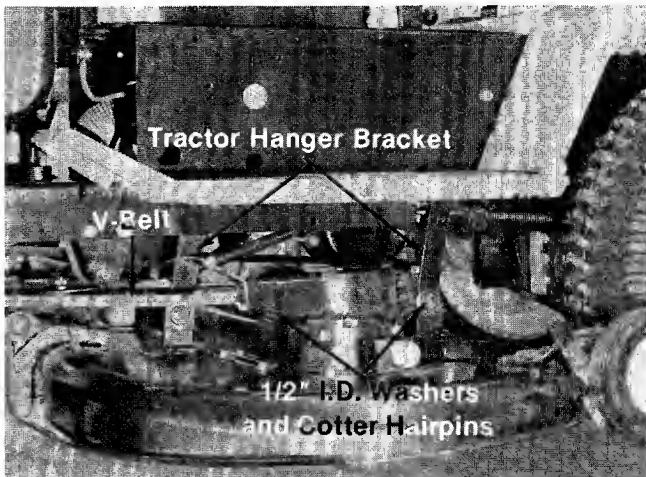


FIGURE 6.

9. Assemble the front cross bar as shown in figure 7 using two large cotter hairpins to attach the deck linkage to the tractor frame.

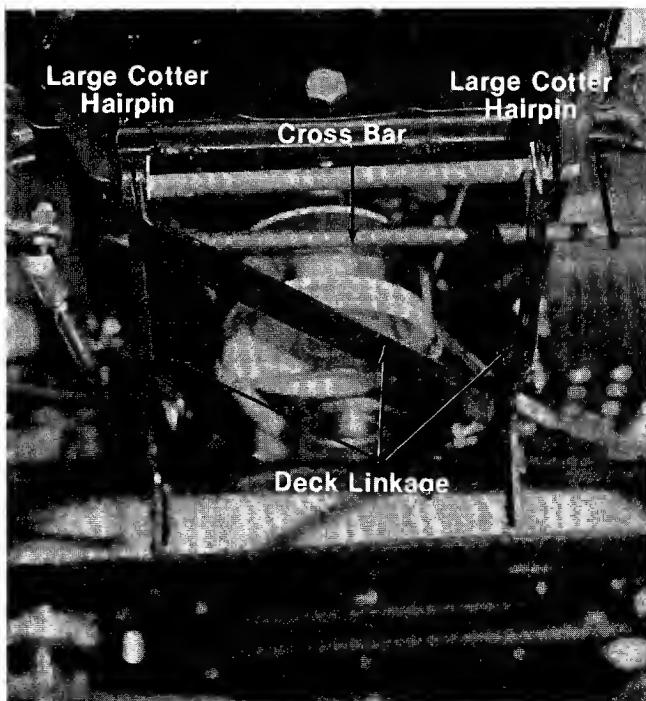


FIGURE 7.

10. Place the deck belt around the engine pulley and idler. (See figure 8.)

11. Replace the round belt guard and swing the wire belt guard over the engine pulley and secure it with the "L" bolt.
12. Check all belt guards for clearance. The belt guards must be between 1/16" and 1/8" away from the belt when the PTO lever is in the engaged position.
13. Hook the brake release cable into the tractor idler bracket and secure it with the small cotter hairpin.

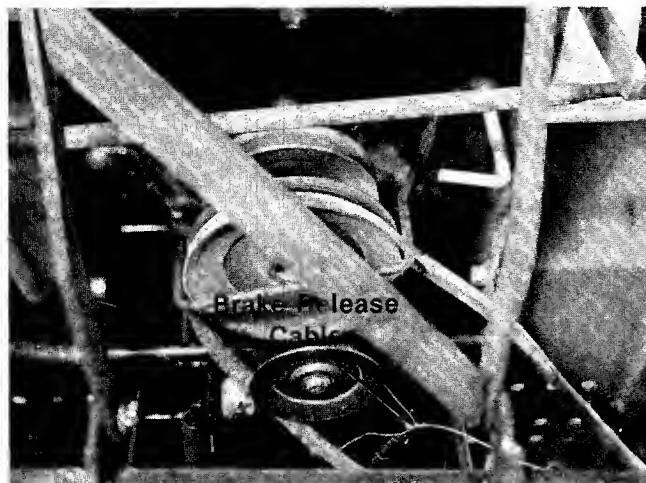


FIGURE 8.

CONTROLS AND PRELIMINARY CHECKS

CONTROLS

Ignition Switch

The ignition switch is located in the center of the dashboard. Turn the key to the START position to start the engine. When the engine is running, leave the key in the ON position. To stop the engine, turn the key to the OFF position. (See figure 9.)



Remove the key from the tractor when the tractor is not in use to prevent accidental starting.

Throttle Control

The throttle control is located on the left side of the dashboard and is used to regulate the engine speed. (See figure 6.) The engine should be operated from $\frac{3}{4}$ to full throttle (FAST) when operating any equipment that uses the tractor engine as a source of power such as the mowing deck, snow thrower or rotary tiller. (See figure 9.)

Choke Control

The choke control is located on the right side of the dashboard and is operated manually. Details for the choke operation are covered in the Engine Operating and Maintenance Instructions Manual. (See figure 9.)

Light Switch

The headlamps are operated by pushing the light switch located on the dashboard. The headlamps will only operate when the engine is running. (See figure 9.)

Ammeter

The ammeter registers the rate of battery charge or discharge. The ammeter should register on the plus (+) side when the engine is running in the FAST position until the battery is completely charged.

With a fully charged battery or with the engine idling, the ammeter may not show a charge.

The maximum charging rate is 3 amps. The headlamps operate directly from the engine alternator and do not register on the ammeter. (See figure 9.)

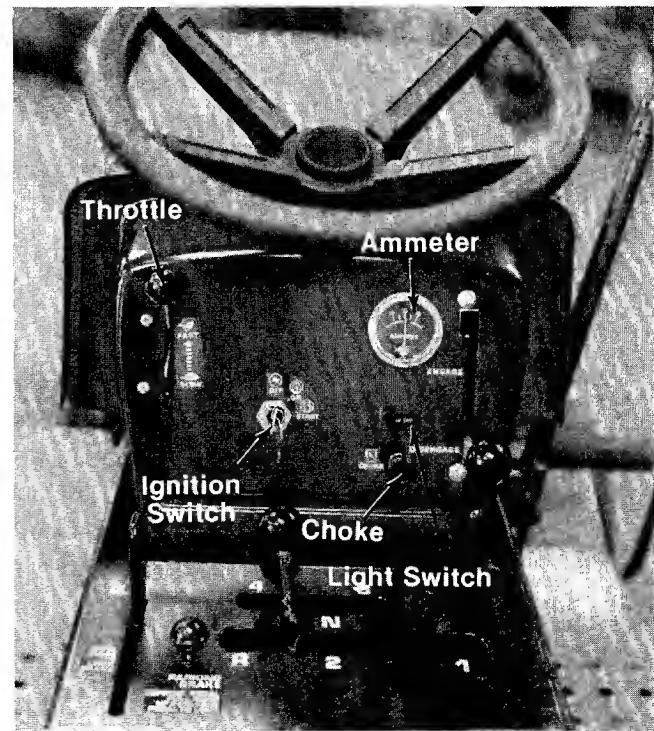


FIGURE 9.

Gasoline Tank

The gasoline tank is located under the tractor seat. Fill the gasoline tank with approximately 1.9 gallons of clean, fresh, lead-free or leaded "regular" grade automotive gasoline. Tip the seat forward to fill the tank. (See figure 10.)

Seat Adjustment

The tractor seat is adjustable to four positions. To change positions, tip the seat all the way forward and lift it out of the slots on each side. (See figure 10.)

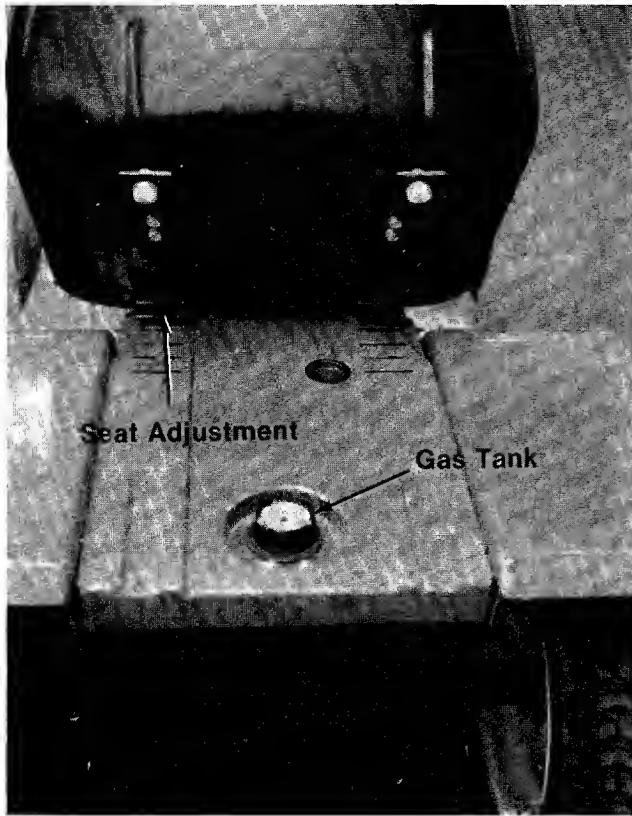


FIGURE 10.

Gear Shift Lever

The transaxle has four forward gears, neutral and reverse. Do **not** shift through the gears on the transaxle as you would in an automobile. Pre-select the gear appropriate for the job you are doing. (See figure 10.)

You must depress the clutch-brake pedal and come to a complete stop before shifting gears. (See figure 11.)

Clutch-Brake Pedal

The clutch-brake pedal is located on the right side of the tractor. Depressing the clutch-brake pedal part way disengages the clutch. Pressing the pedal all the way down disengages the clutch and engages the disc brake.



The clutch-brake pedal must be depressed to start the engine.

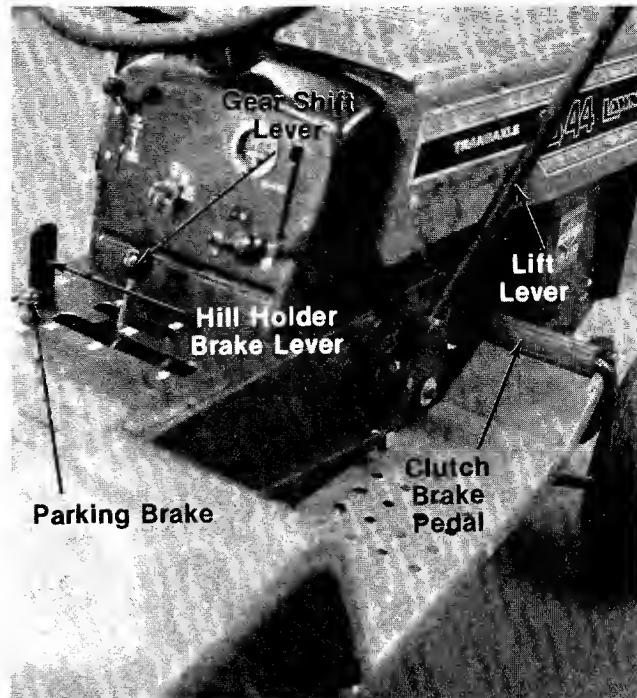


FIGURE 11.

Parking Brake

To set the parking brake, depress the clutch-brake pedal and pull up the parking brake knob. It will stay in the raised position. To release the parking brake, depress and release the clutch-brake pedal. (See figure 11.)

Hill Hold Brake Lever

When stopping on a hill, hold the lever back while you release the clutch-brake pedal until the tractor begins to move, then release the lever. This prevents you from rolling down the hill while releasing the clutch. (See figure 11.)

Lift Lever

The five position lift lever is used to change the operating position of the attachments. To operate, pull the lever towards you. To release, move the lever to the right and then forward. (See figure 12.)

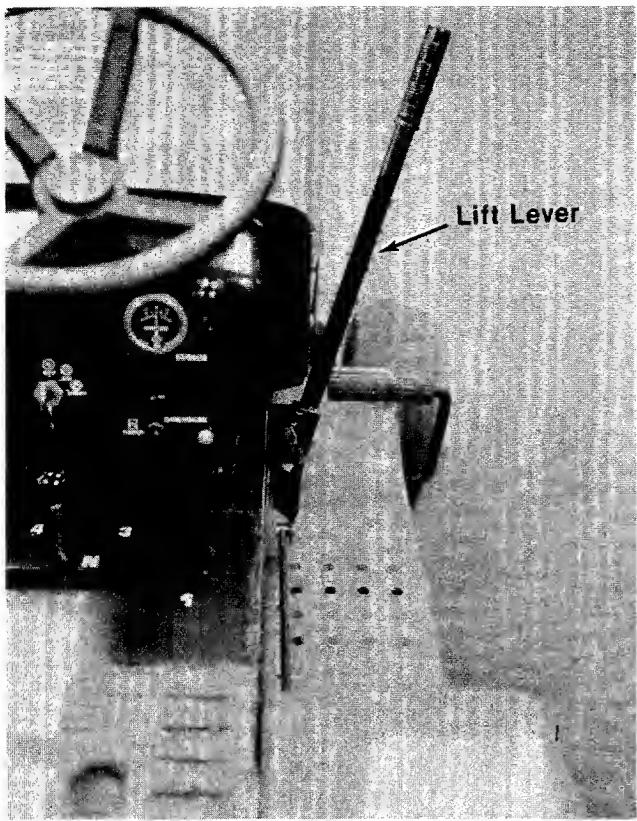


FIGURE 12.
Power Take Off (PTO) Lever

The PTO lever is located on the right side of the dashboard. To engage the PTO, lift the lever slowly and lock it into the notch. (See figure 13.)



The PTO lever must be in the disengaged position (down) to start the engine.

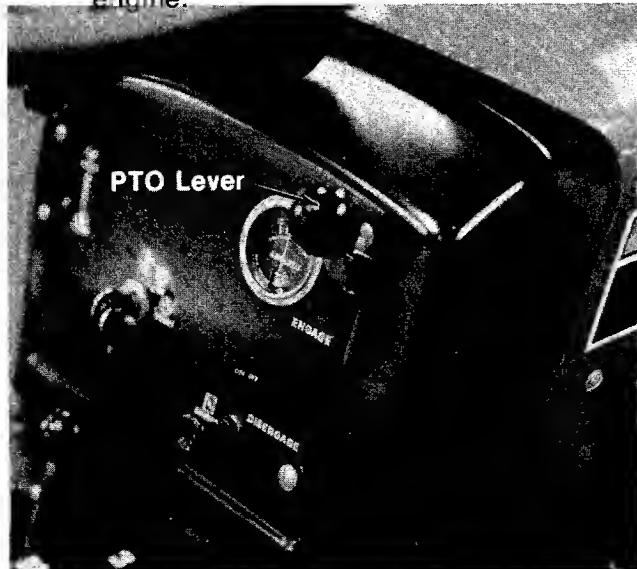


FIGURE 13.

CHECKING OIL AND GASOLINE



When packaged for shipment, the machine contains no oil or gasoline. Before starting the engine, oil must be added to the engine crankcase and gasoline to the tank. DO NOT mix oil with gasoline.

Briggs & Stratton. Use a high quality detergent oil classified "For Service SC or SD or MS". Nothing should be added to the recommended oil.

Summer. (Above 40°F.) Use SAE 30. If not available use SAE 10W-30 or SAE 10W-40.

Winter. (Under 40°F.) Use SAE 5W-20 or SAE 5W-30. If not available, use SAE 10W or SAE 10W-30. Below 0°F., use SAE 10W or SAE 10W-30 diluted 10% with kerosene.

Place the engine level. Fill the oil sump to the FULL mark on the dipstick. Pour slowly.

Crankcase Capacity—3 Pints.

OPERATION

CAUTION

1. KEEP ALL SHIELDS & GUARDS IN PLACE
2. BEFORE LEAVING OPERATOR'S POSITION:
SHIFT CONTROLS INTO NEUTRAL
SET PARKING BRAKE
DISENGAGE ATTACHMENT DRIVE
SHUT ENGINE OFF
REMOVE IGNITION KEY
3. WAIT FOR ALL MOVEMENT TO STOP BEFORE SERVICING MACHINE
4. KEEP PEOPLE & PETS A SAFE DISTANCE AWAY FROM MACHINE

Operation

1. Place the PTO lever in the disengaged (down) position.
2. Pull out the choke control. A warm engine requires less choking.
3. Set the throttle control in the FAST Position.
4. Depress the clutch-brake pedal and hold it down.
5. Turn the ignition key to the START position. After the engine starts, release the key.
6. With the clutch-pedal depressed, move the gear shift lever into one of the forward gears.
7. Slowly release the clutch-brake pedal and the tractor will move forward.

8. When stopping, depress the clutch-brake pedal. This will apply both the clutch and the brake.
9. To shut off the engine, turn the ignition key to the left to the OFF position.

IMPORTANT

After striking a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.

MAINTENANCE—Garden Tractor

TROUBLESHOOTING

Refer to the chart on page 36 for troubleshooting engine problems.

CRANKCASE OIL

To ensure maximum engine performance, perform the following periodic maintenance:

Oil Check

Check the oil level in the crankcase before each use of the machine and after every two hours of operation. Keep the oil level between ADD and FULL. See figure 14.

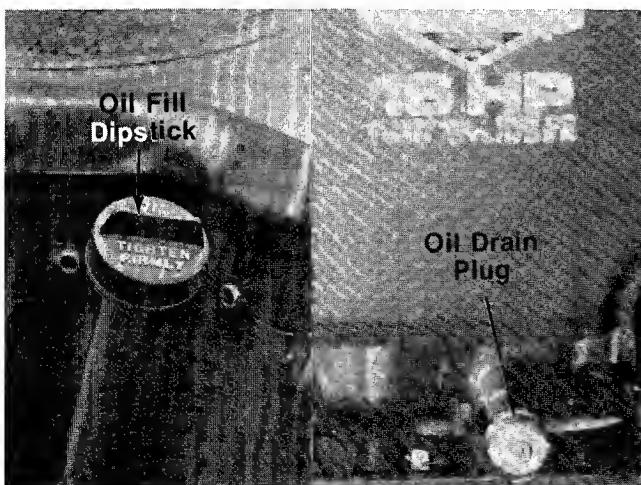


FIGURE 14.

Oil Change

After the first two hours of operating a new engine, drain the oil (see figure 14) from the crankcase while engine is still hot and refill crankcase with new oil; thereafter change the oil after every 25 hours of operation. This procedure ensures for minimum wear of engine parts and provides for virtually trouble-free operation. To change the oil, proceed as follows:

- Step 1. Remove oil filler plug.
- Step 2. Drain the oil.
- Step 3. Replace oil filler plug.
- Step 4. Refill crankcase with oil. See page 10 for quantity and type of oil.

Steering Gears

Wipe off the old grease and dirt. After every 25 hours of operation place an automotive multi-purpose grease in the teeth of the segment and pinion gears. (See figure 15.)

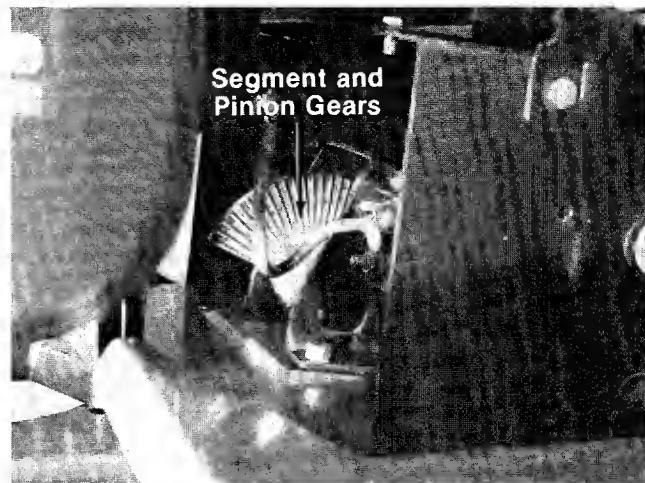


FIGURE 15.

Transaxle

Check the oil level four times a year. Lubricant should be at the point of overflowing. Use E.P. 90 oil. Drain and refill every two years. Capacity 4 pints. (See figure 16.)

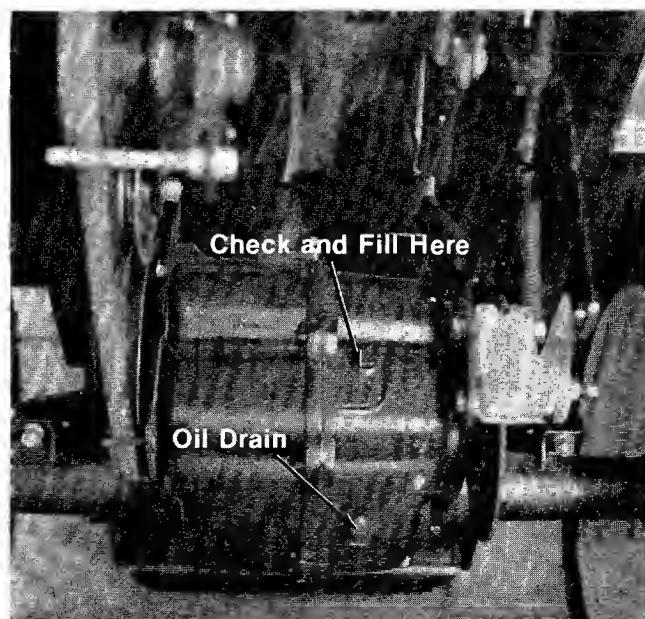


FIGURE 16.

Linkage—Once a season lubricate all the pivot points on the clutch, brake and lift linkage with SAE 30 engine oil.

Wheel Bearings—The front wheel bearings and king pin bearings have Oilon PV 80 bearings that require no lubrication.

Ball Joints—The ball joints and drag link ends are permanently lubricated.

Fuel Shut-Off Valve and Filter

The valve and filter is located on the bottom of the gasoline tank located at the extreme rear of the tractor.

Turn the valve knob in to shut off the fuel flow. Turn the valve knob out to operate the tractor. (See figure 17.)

The entire valve can be pulled out to clean the filter. When reassembling, place the rubber grommet into the gasoline tank first, then push the valve all the way in.



Only use factory approved parts if repairs are needed on the gasoline tank, grommet, valve or gasoline line.

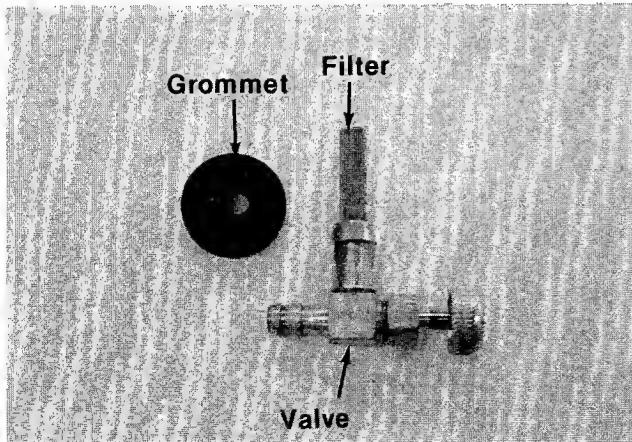


FIGURE 17.
Installation of Tire to Rim



The following procedure must be followed when removing or installing a tire to the rim.

1. Lubricate the tire beads and rim flanges.
2. Do not exceed 30 p.s.i. when seating beads.
3. Adjust to recommended pressure after beads are sealed.

Rear Wheel Tract Adjustment

The distance between the rear wheels can be changed from wide to narrow by removing the rear wheels one at a time and reversing them on the hub.

With the rear wheels in the narrow position, the outside of the rear wheels is even with the outside of the front wheels.

With the rear wheels in the wide position, the inside of the rear wheels is even with the inside of the front wheels.

Wheel Alignment

The front wheels should toe-in approximately 1/8". Measure the distances A and B on the front wheels. (See figure 18.)



Dimension B should be approximately 1/8 inch less than dimension A.

To adjust the toe-in, loosen the hex jam nut, remove the elastic locknut, lift the tie rod end out of the hole in the steering arm and screw the tie rod end in or out as necessary. (See figure 18.)

Reassemble the tie rod end after the correct alignment is made.

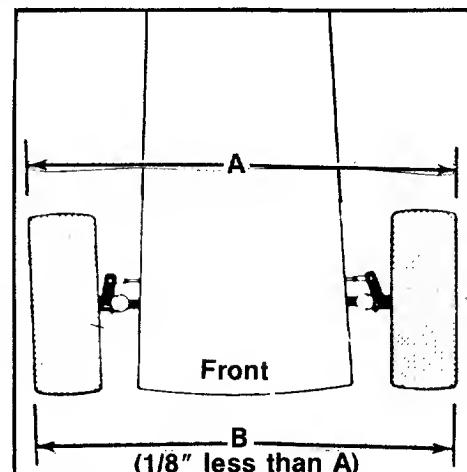


FIGURE 18.

Drag Link

If the drag link or ball joints are changed, the new assembly must be adjusted to the exact same length as the original. If adjusted wrong it will allow the tractor to turn sharper one direction than the other.

To take off the drag link, remove the nuts and lock washers holding the ball joint to the steering gear and left front axle bracket.

Brake Adjustment

CAUTION

Do not adjust the brake while the engine is running. Be sure to block the wheels of the tractor before making the brake adjustment.

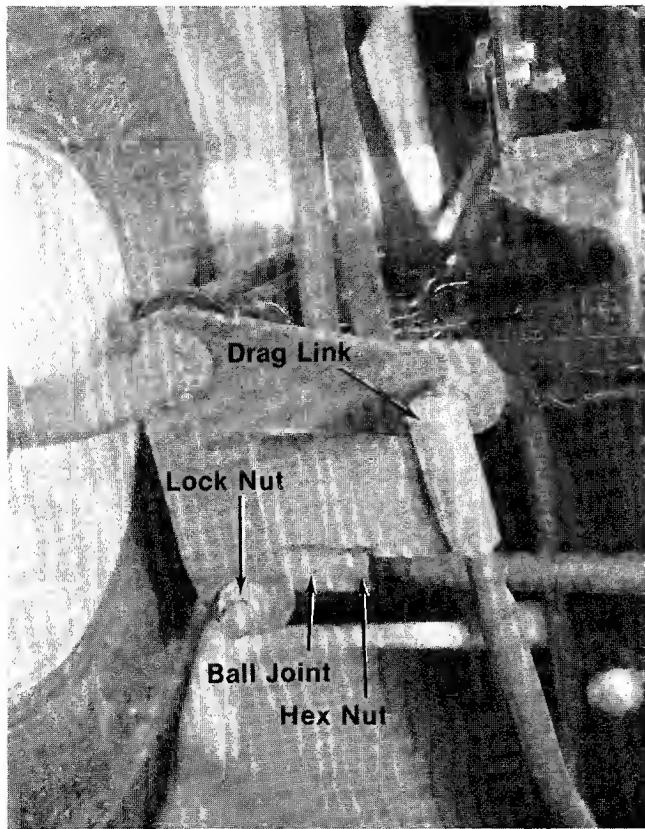


FIGURE 19.

1. Loosen the lock nut. (See figure 20.)
2. Tighten the center bolt all the way in.
3. Unscrew the center bolt one complete turn.
4. Test the brakes and repeat step three if necessary.
5. Tighten the lock nut.

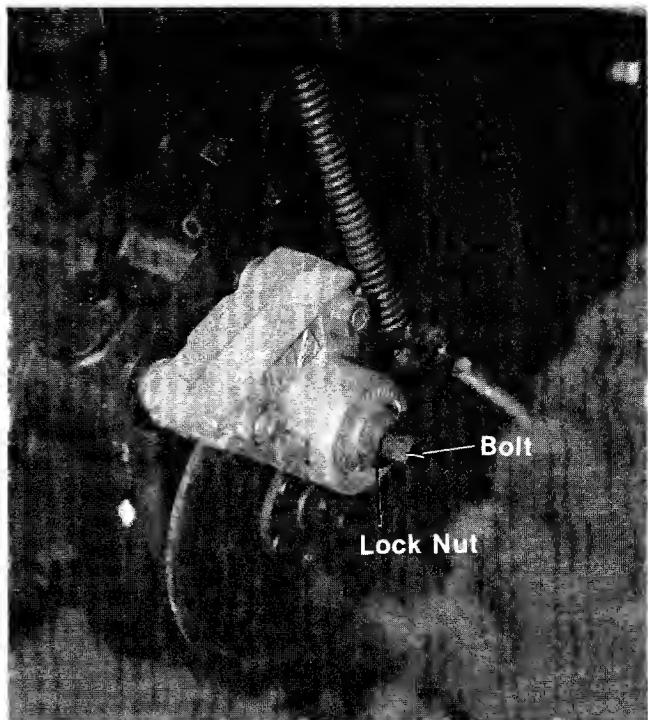


FIGURE 20.

Changing the Front Drive Belt

1. Remove the cutting deck and battery.
2. Raise and block the front wheels of the tractor so you can work under it.
3. Unscrew the belt guard release next to the engine pulley. (See figure 21.)

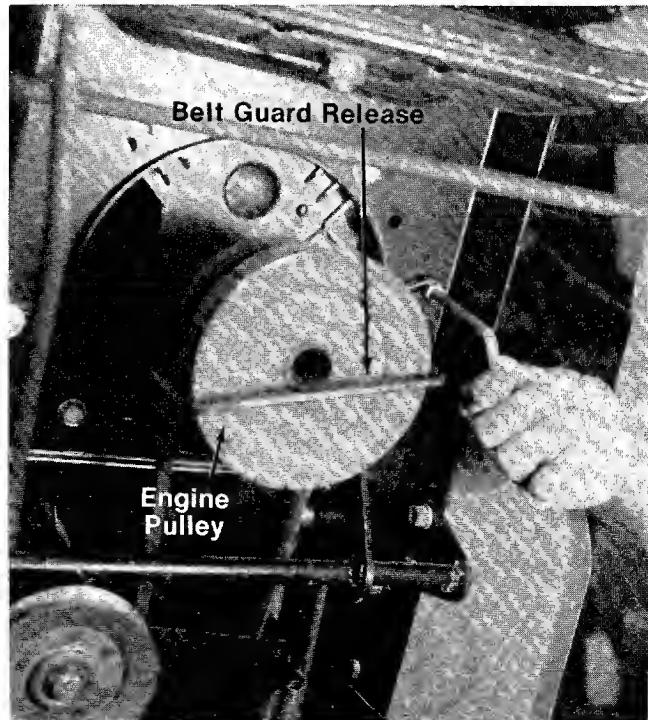


FIGURE 21.

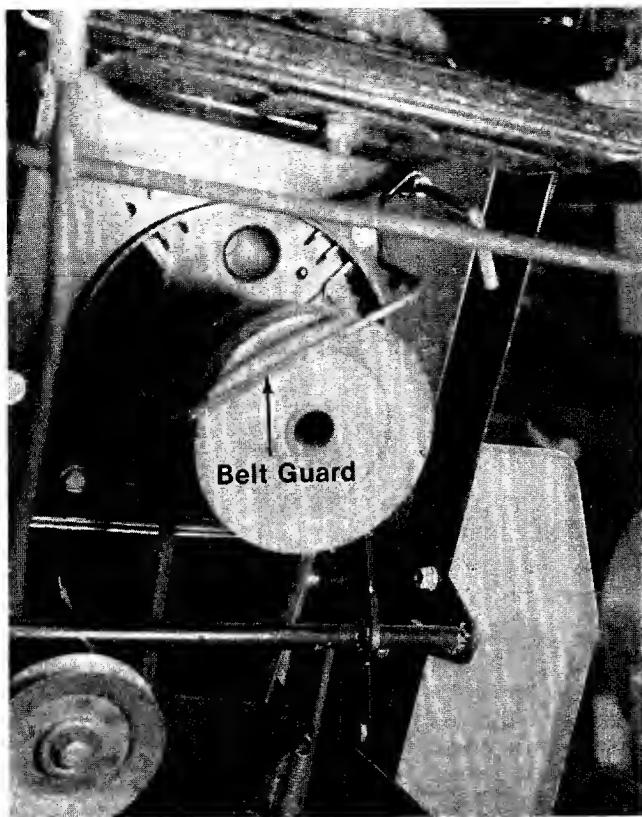


FIGURE 22.

4. Swing the belt guard forward towards the front of the tractor. (See figure 22.)



Observe the way the belt is twisted. If the new belt is installed backwards, the tractor will run backwards.

5. Using a bar or large screw driver, pry the pulley assembly towards the front of the tractor and unhook the belt from the pulley. (See figure 23.)
6. Install the new belt by hooking it over the engine pulley and twisting the belt to the left as you attach it to the pulley.
7. Test the operation of the tractor to assure the belt has been installed correctly.

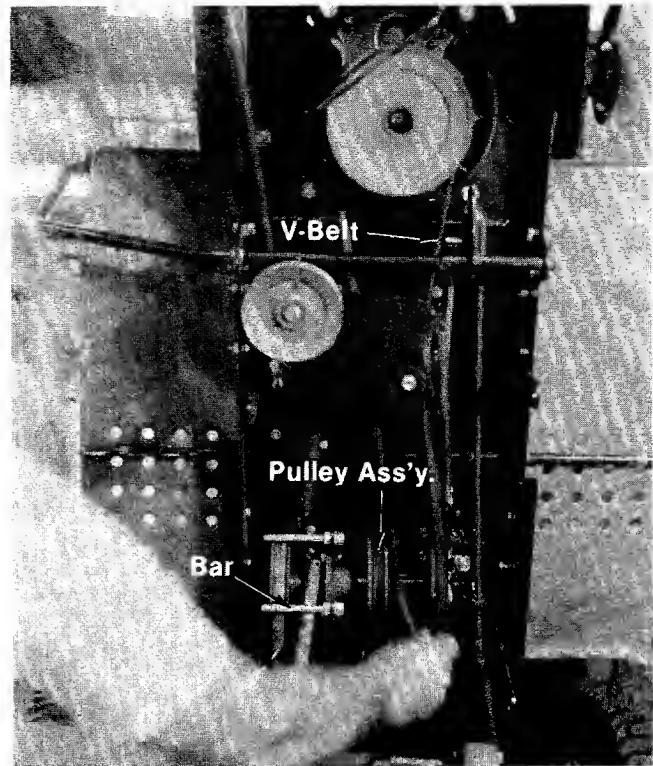


FIGURE 23.

Removing the Rear (Clutch) Belt

1. Remove the cutting deck and battery.
2. Raise and block the front wheels of the tractor so you can work under it.
3. Depress the clutch-brake pedal and set the parking brake.
4. Remove the two belt guard pins on the pulley assembly. (See figure 24.)

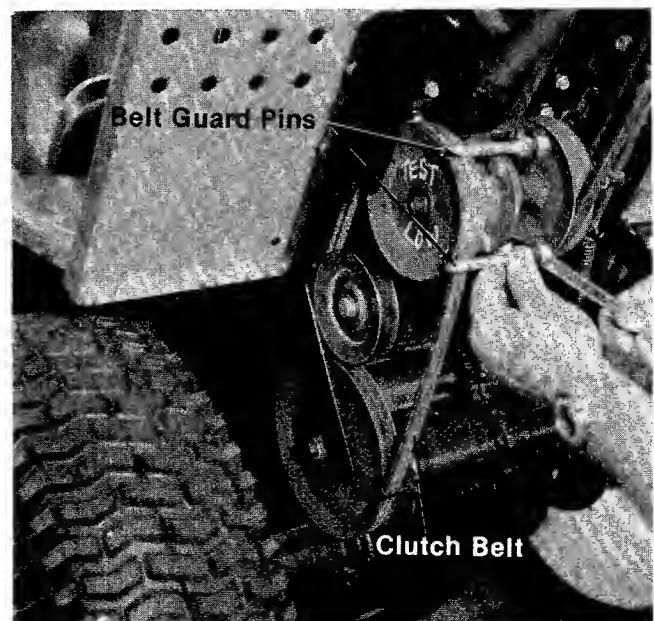


FIGURE 24.

5. Take off the idler assembly by removing the center bolt.



Be sure the belt clip is reassembled the same way. (See figure 25.)

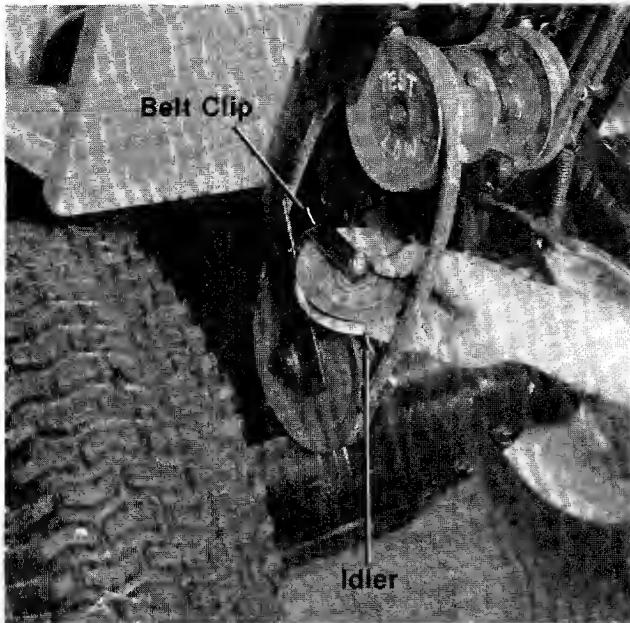


FIGURE 25.

6. Remove the center bolt and slide the transaxle pulley off. (See figure 26.)
7. Reassemble in reverse order with a new V-belt.

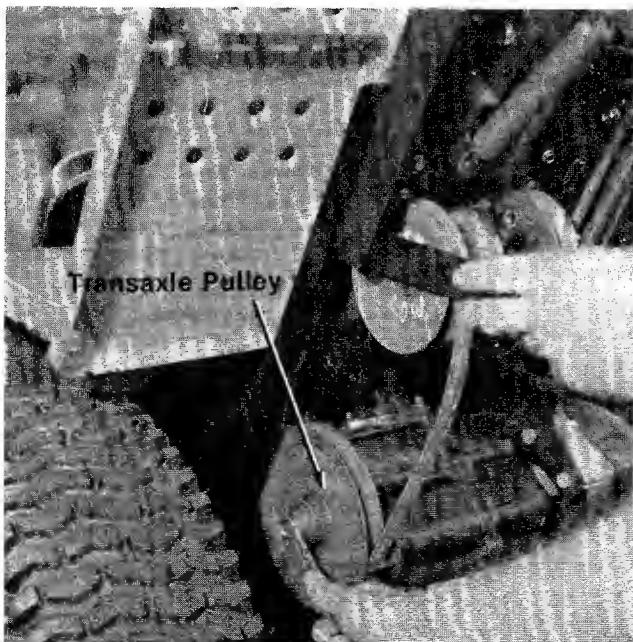


FIGURE 26.

Clean Air Cleaner

Clean and re-oil foam pre-cleaner at 3 month intervals or every 25 hours, whichever occurs first.

1. Remove the wing nut and cover.
2. Remove the hex nut and washer with a 7/16" wrench and lift off the inner oblong cover.
3. Remove the foam pre-cleaner element by sliding it off the paper filter cartridge.
 - A. Wash foam in liquid detergent and water.
 - B. Squeeze dry.
 - C. Oil with one ounce of engine oil. Squeeze to distribute oil evenly. Remove excess oil.
4. Install foam element over the paper filter cartridge. Install the oblong inner cover and secure with the hex nut. Replace the outer cover and secure with the wing nut.

Yearly or every 100 hours, whichever occurs first, remove paper air filter cartridge. Clean by tapping gently on flat surface. If very dirty, replace cartridge, or wash in liquid detergent and water. Rinse until water remains clear. Cartridge must be air dried thoroughly before re-using. (See figure 27.)

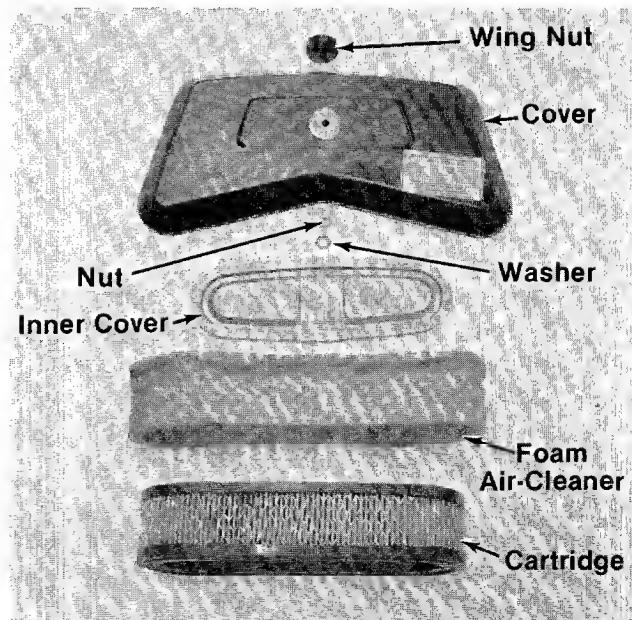


FIGURE 27.

Clean Cooling System

Grass or chaff may clog cooling system after prolonged service. Continued operation with a clogged cooling system causes severe overheating and possible engine damage. Remove blower housing and clean regularly. (See figure 28.)

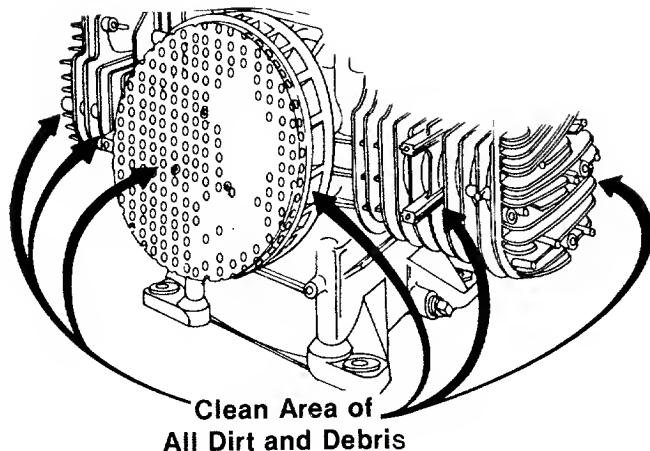


FIGURE 28.
Carburetor Adjustments



WARNING

If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustments may be required to compensate for differences in fuel, temperature, altitude and load.

To Adjust Carburetor—Turn needle valve clockwise until it just closes.



CAUTION

Valve may be damaged by turning it in too far.

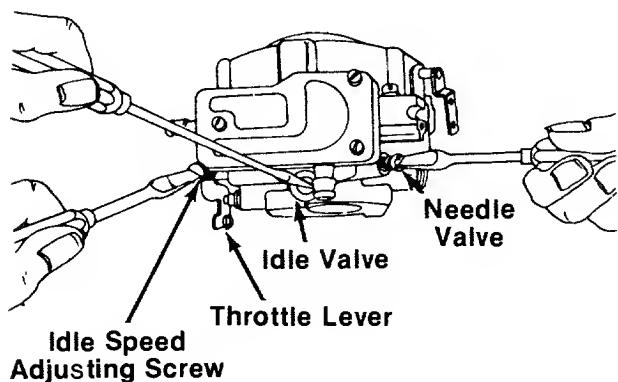


FIGURE 29.

Now open needle valve $1\frac{1}{2}$ turns counterclockwise. Close idle valve in same manner and open $1\frac{1}{2}$ turns. This initial adjustment will permit the engine to be started and warmed up prior to final adjustment (See figure 29.)

Final Adjustment

Place governor speed control lever in "IDLE" position. Hold throttle lever against idle stop and set idle speed adjusting screw to obtain 1400 R.P.M. Turn idle valve slowly clockwise (lean mixture) until engine misses or R.P.M. slows. Then turn idle valve $\frac{1}{2}$ turn counterclockwise.

Hold throttle shaft in closed position and adjust idle speed screw to 900 R.P.M. Release the throttle. With remote control in idle position, adjust tab "A" to obtain 1400 R.P.M.



NOTE

Governed idle must be adjusted on all engines for proper operation. The smaller spring keeps the engine on governor, even at idle speed. If moderate loads are applied at idle, the engine will not stall. Idle speed should be no lower than 1100 R.P.M.

Place governor speed control lever in fast position. Then turn needle valve in slowly clockwise (lean) until engine misses or R.P.M. slows. Then turn needle valve $\frac{1}{2}$ turn counterclockwise.

If engine does not accelerate properly, readjust needle valve approximately $1/8$ turn counterclockwise (richer). (See figure 30.)

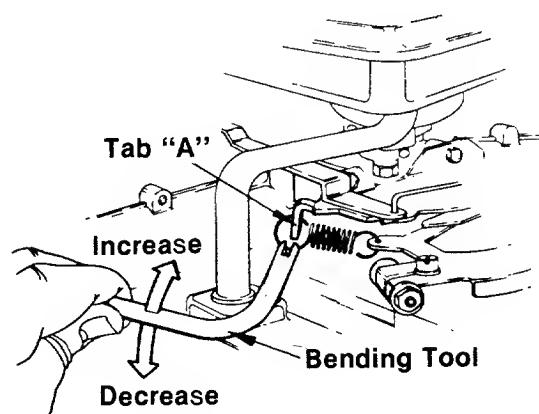


FIGURE 30.

MAINTENANCE CUTTING DECK

CAUTION
DO NOT OPERATE MOWER UNLESS GUARD OR ENTIRE GRASS CATCHER IS IN ITS PROPER PLACE.



FIGURE 31.

Keep hands and feet away from the chute area on cutting deck. See figure 31.

Lubrication

The blade spindles on the cutting deck are permanently lubricated.

Cutting Blade

The blades may be removed for sharpening or replacement as follows:

1. Remove the large bolt and lock washer holding the blade and adapter to the blade spindle.
2. Remove the blade and adapter from the crankshaft.
3. Remove the two smaller bolts, lock washers and nuts holding the blade to the adapter. (See figure 32.)

When sharpening the blade, follow the original angle of grind as a guide. It is extremely important that each cutting edge be ground equally to prevent an unbalanced blade. An unbalanced blade will cause excessive vibration when rotating at high speeds and may cause damage to the mower.

The blade can be tested for balance by balancing it on a screwdriver. Remove metal from the heavy side until it balances evenly. (See figure 33.)



FIGURE 32.

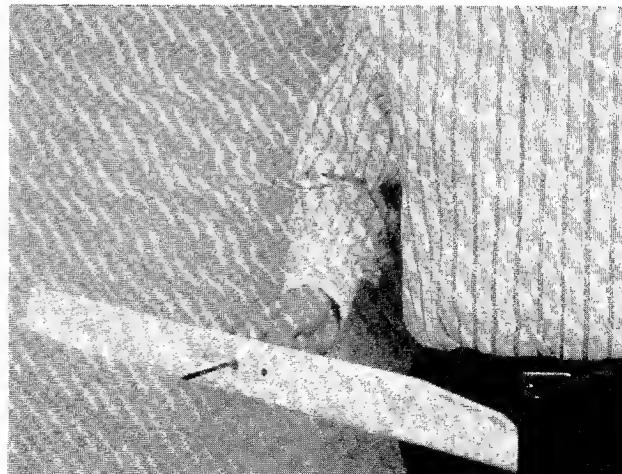


FIGURE 33.

Removing the Deck Belt

1. Remove the two hex screws holding the belt guard to the timing belt cover. (See figure 34.)
2. Replace the belt and reassemble.

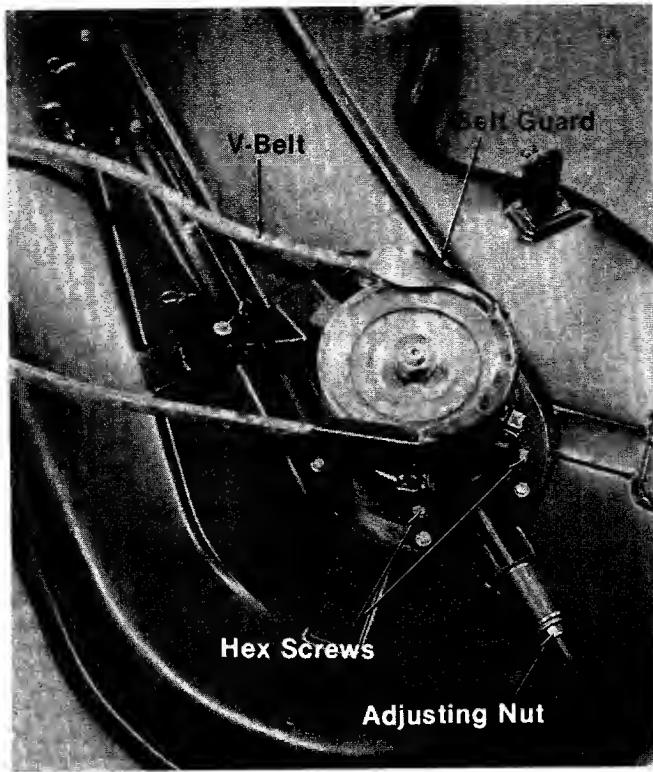


FIGURE 34.

Removing the Blade Belt

1. Remove the belt guard and drive pulley. (See figure 34.)
2. Remove the blade belt cover.
3. Loosen the four hub bolts. (See figure 37.)
4. Loosen the tension adjusting nut. (See figure 35.)

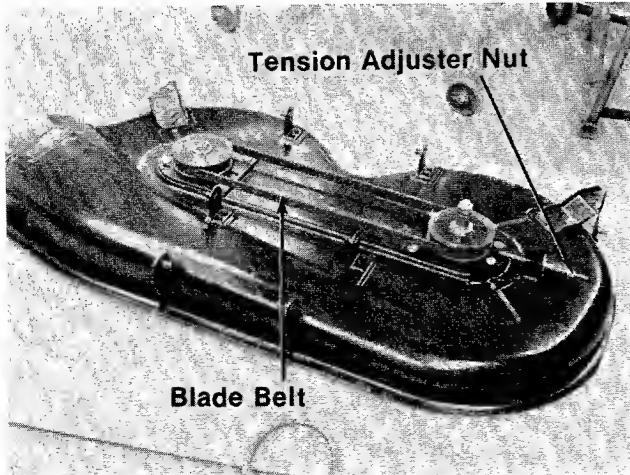


FIGURE 35.

5. Remove and replace the blade belt.
6. Reassemble and adjust the belt tension. (See figure 37.)

NOTE

Scalping the ground or running over a clump of dirt can knock the blades out of timing. Stop the tractor and retime the blades.

Timing the Blades

1. Remove the center blade bolt on either blade.
2. Rotate the blade on the cutting deck and reassemble the other blade at 90° exactly as shown in figure 36.

NOTE

If the blades are not timed it will affect the cut of the grass and the discharge.

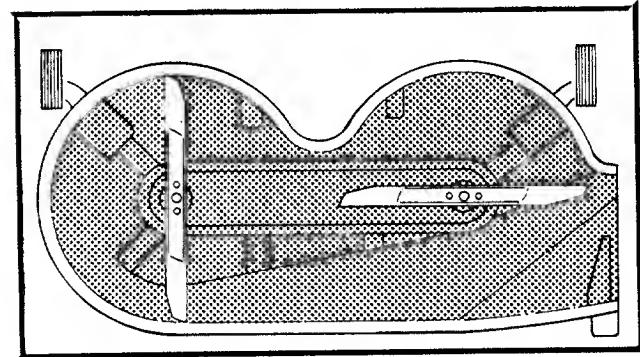


FIGURE 36.

Adjusting the Belt Tension

1. Loosen the four spindle nuts on the bottom of the cutting deck. (See figure 37.)
2. Tap the deck with a hammer handle to loosen the washers on the four spindle nuts.
3. Tighten the tension adjustment nut. See figure 35.
4. Tighten the four spindle nuts.

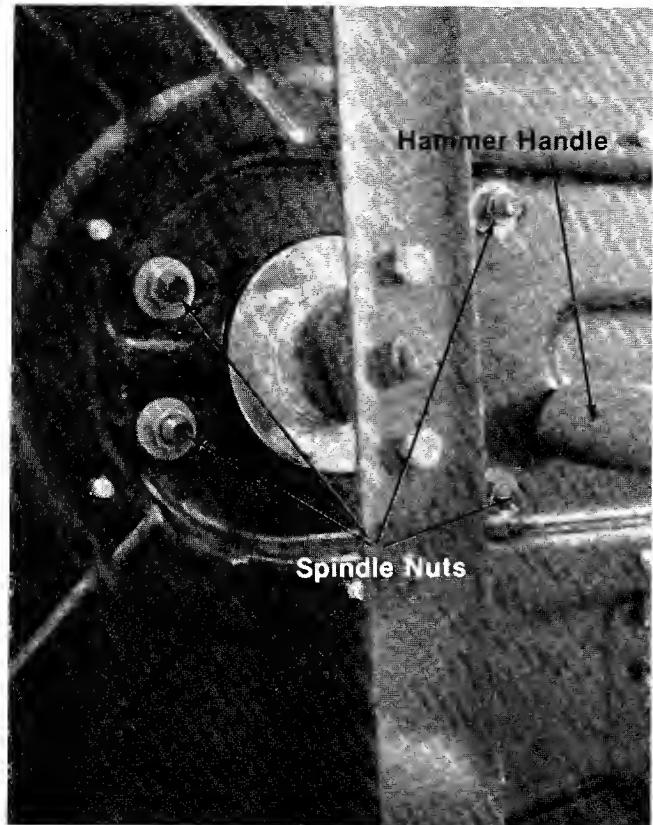


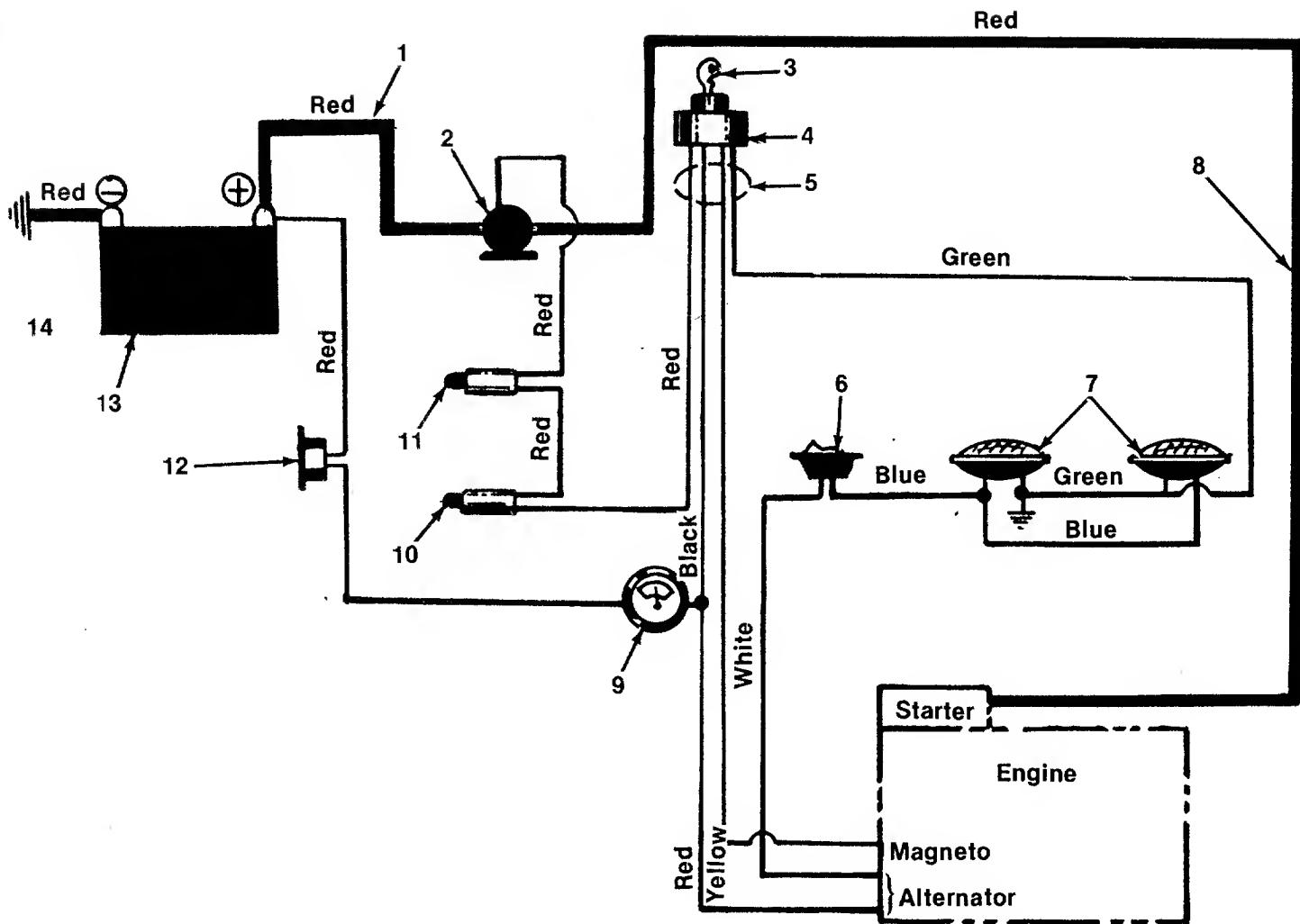
FIGURE 37.

OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, the following procedures are recommended:

1. Working outdoors, drain all fuel from the fuel tank. Use a clean dry cloth to absorb the small amount of fuel remaining in the tank, then run the engine until all fuel in the carburetor is exhausted.
2. Drain all the oil from the crankcase (this should be done after the engine has been operated and is still warm) and refill the crankcase with clean new oil.
3. Disconnect the spark plug wires and remove the spark plugs from the cylinders. Pour about 2 or 3 tablespoons of engine oil into each cylinder, and then turn the engine over several times to spread out the oil. Replace the spark plugs but do not connect the wires.
4. Clean the engine and the entire tractor thoroughly.
5. Lubricate all lubrication points and wipe the entire machine with an oiled rag in order to protect the surfaces.
6. Follow battery storage instructions on page 6.

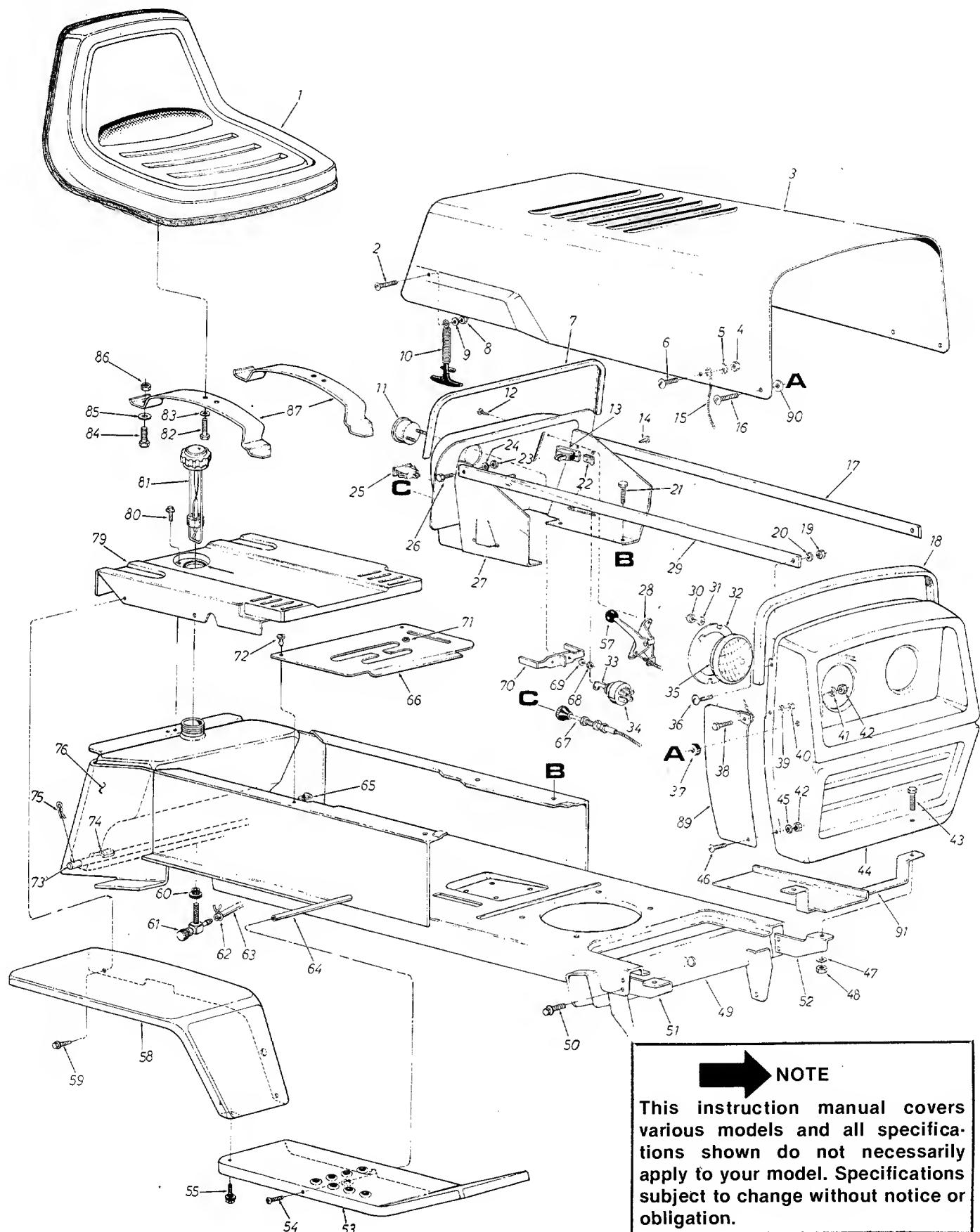
140-830A



PARTS LIST FOR ELECTRICAL SYSTEM 140-830A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	725-0563	Electric Cable		
2	725-0530		Solenoid	
3	725-0201		Ignition Key	
4	725-0267		Ignition Switch	
5	725-0666		Wire Harness	
6	725-0634		Light Switch	
7	725-0222		Headlight	
8	725-0561		Electric Cable	
9	725-0119		Ammeter	
10	725-0465		Safety Switch	
11	725-0268		Safety Switch—Black N.O.	
12	725-0459		Circuit Breaker	
13	725-0661		12 V-Battery	
14	725-0563		Electric Cable	

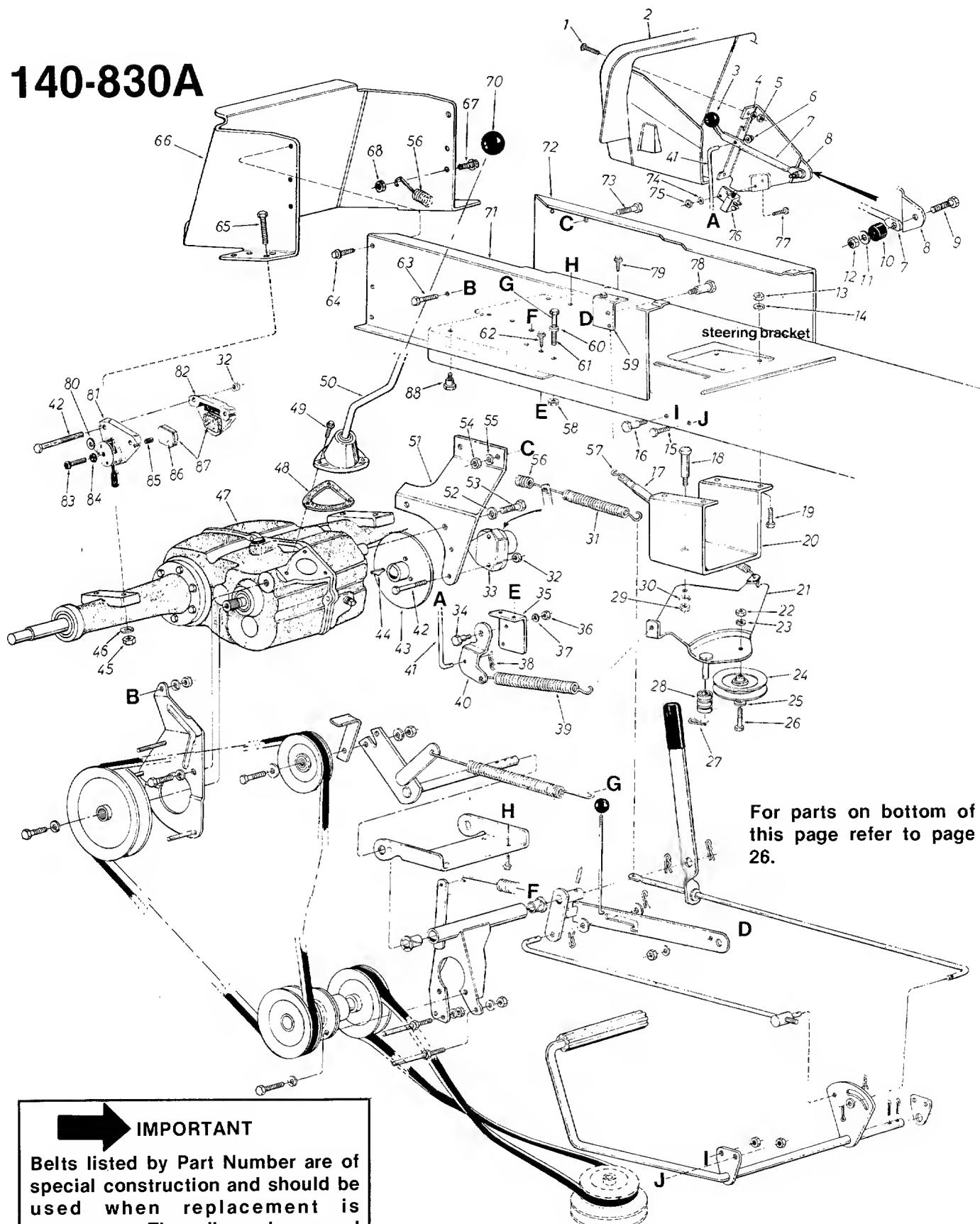
140-830A



PARTS LIST FOR MODEL 140-830A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	757-0286		Seat Assembly		49	13820		Lower Frame Ass'y.	
2	710-0286		Truss Mach. Scr. 1/4-20 x .50" Lg.*		50	710-0600		Hex Thd. Rolling Scr. 5/16-24 x .50" Lg.	
3	13808 —462		Hood		51	13862		Grille Mount Brkt.—R.H.	
4	712-0287		Hex Nut 1/4-20 Thd.*		52	13863		Grille Mount Brkt.—L.H.	
5	736-0329		L-Wash. 1/4" Scr.*		53	13828 —452		Running Board—R.H.	
6	710-0286		Truss Mach. Scr. 1/4-20 x .50" Lg.*		13827 —452			Running Board—L.H. (Not Shown)	
7	731-0423		Vinyl Molding Strip		54	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.*	
8	712-0287		Hex Nut 1/4-20 Thd.*		55	710-0600		Hex Thd. Rolling Scr. 5/16-24 x .50" Lg.	
9	736-0329		L-Wash. 1/4 Scr.*					Grommet (Gas Tank Neck)	
10	723-0296		Hood Latch Ass'y.		56	735-0179		Knob (Throttle Control)	
11	725-0119		Ammeter		57	720-0166		Fender Ass'y.—R.H.	
12	710-0351		Hex Tap Scr. #10 x .50" Lg.*		58	13810 —462		Fender Ass'y.—L.H. (Not Shown)	
13	725-0459		Circuit Breaker 8 Amp.		13809 —462			Hex Thd. Rolling Scr. 5/16-24 x .50" Lg.	
14	710-0351		Hex Tap Scr. #10 x .50" Lg.*					Bushing (Gas Tank)	
15	727-0199		Hood Stop		59	710-0600		Fuel Shut-Off Valve	
16	710-0255		Truss Mach. Scr. 1/4-20 x .75" Lg.*		60	735-0149		Hose Clamp 3/8"	
17	749-0220		Grille Positioning Rod		61	751-0171		Gas Line 60" Lg.	
18	722-0137		PVC Foam Strip 1/2 x 1.00" x 12.5" Lg.		62	726-0183		Running Board Rod	
19	712-0287		Hex Nut 1/4-20 Thd.*		63	751-0173		Speed Nut	
20	736-0329		L-Wash. 1/4" Scr.*		64	738-0435		Transmission Cover	
21	710-0599		Hex Thd. Rolling Scr. 1/4-20 x .50" Lg.		65	726-0156		Choke Control Comp.	
22	712-0344		Speed Nut #10 Z		66	13834 —452		Part of Ref. No. 11	
23	712-0287		Hex Nut 1/4-20 Thd.*		67	746-0343		Part of Ref. No. 11	
24	736-0329		L-Wash. 1/4" Scr.*		68	—		Part of Ref. No. 11	
25	725-0634		Light Switch		69	—		Snap Bushing	
26	710-0166		Truss Hd. Scr. 1/4-20 x 1.00" Lg.*		70	—		Truss Hd. Scr. 1/4-20 x .75" Lg.	
27	13843		Dash Panel Ass'y.		71	731-0405		Hitch Rod	
28	746-0354		Throttle Control Comp.		72	710-0473		PVC Foamstrip 1/2" x 1.00" x 2.00"	
29	749-0220		Grille Positioning Rod		73	738-0401		Internal Cotter Pin	
30	712-0287		Hex Nut 1/4-20 Thd.*		74	722-0135		Gas Tank	
31	736-0329		L-Wash. 1/4" Scr.*		75	714-0149		Seat Plate	
32	09960		Head Lamp Retainer		76	751-0259		Hex Thd. Rolling Scr. 5/16-24 x .50" Lg.	
33	725-0201		Ignition Key		79	13814		Gas Gauge	
34	725-0267		Ignition Switch		80	710-0600		Hex Scr. 5/16-18 x .75" Lg.*	
35	725-0222		Head Lamp		81	723-0346		L-Wash. 5/16" Scr.*	
36	710-0258		Hex Scr. 1/4-20 x .62" Lg.*		82	710-0118		Hex Scr. Nylon Scr. 1/2-13 x .75" Lg.	
37	735-0144		Rubber Wash. .50" I.D. x 1.00 O.D. x .25 Thk.		83	736-0119		Fl-Wash. .50" I.D. x 1.00" O.D. x .090	
38	710-0286		Truss Mach. Scr. 1/4-20 x .50" Lg.*		84	710-0689		Hex Nut 1/2-13 Thd.*	
39	736-0329		L-Wash. 1/4" Scr.*		85	736-0192		Seat Spring	
40	712-0287		Hex Nut 1/4-20 Thd.*					Grille Side Panel—R.H.	
41	736-0329		L-Wash. 1/4" Scr.*		86	712-0206		Grille Side Panel—L.H. (Not Shown)	
42	712-0287		Hex Nut 1/4-20 Thd.*		87	13123		Fl-Wash. 1/4" I.D.	
43	710-0118		Hex Scr. 5/16-18 x .75" Lg.*		89	13864 —462		Muffler Shield	
44	13801 —462		Grille Ass'y.		13235 —462			Fuel Line Connector (Not Shown)	
45	736-0329		L-Wash. 1/4" Scr.*		90	736-0173			
46	710-0286		Truss Mach. Scr. 1/4-20 x .50" Lg.*		91	14150			
47	736-0119		L-Wash. 5/16" Scr.*		751-0272				
48	712-0267		Hex Nut 5/16-18 Thd.*						

140-830A



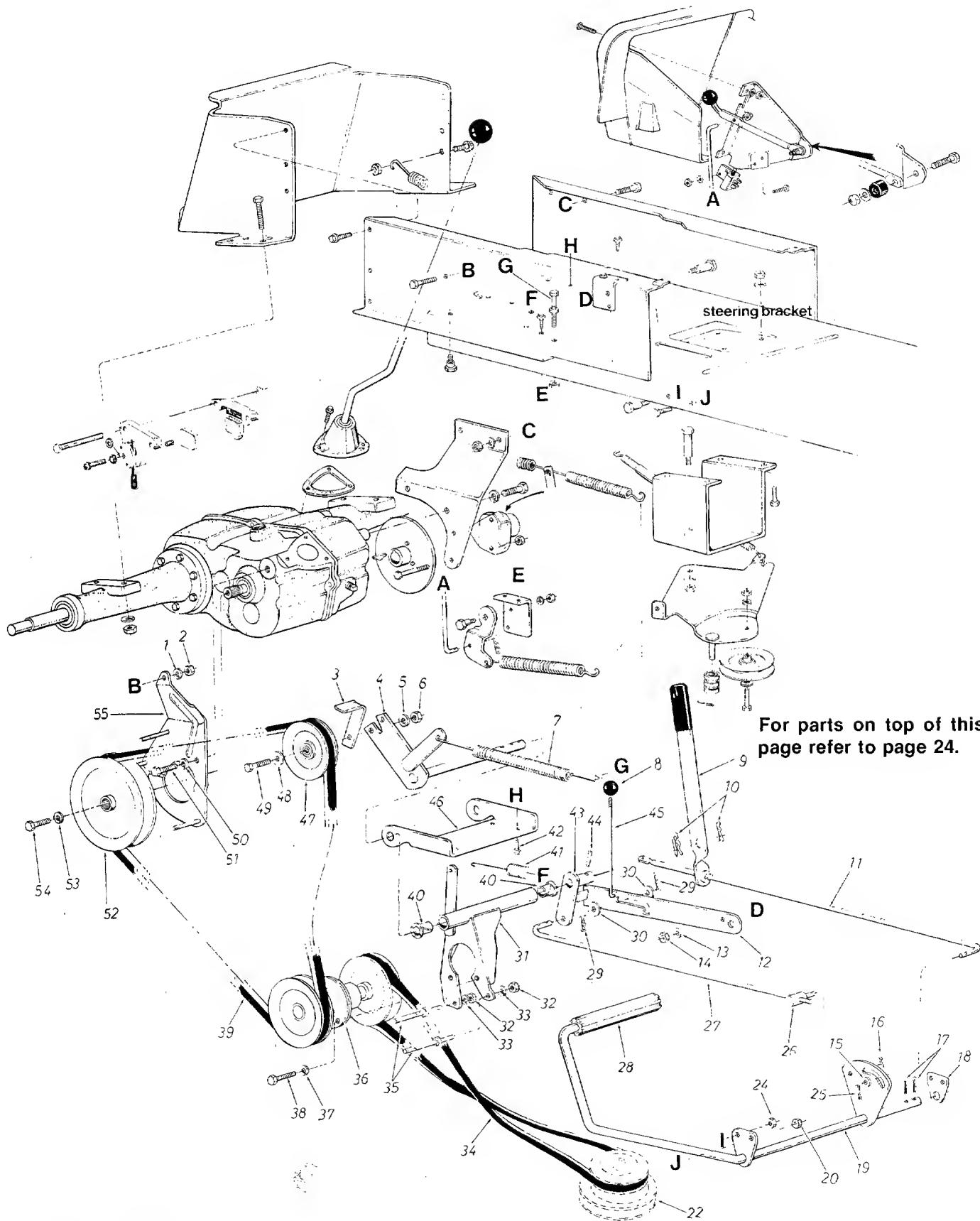
PARTS LIST FOR MODEL 140-830A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	710-0286		Truss Mach. Scr. 1/4-20 x .50" Lg.*	47	—			Transaxle (See page 34 for Breakdown)	
2	13843		Dash Panel Ass'y.	48	—			Part of Ref. No. 47	
3	720-0165		Knob—Blade Clutch	49	—			Part of Ref. No. 47	
4	736-0329		L-Wash. 1/4" Scr.*	50	—			Part of Ref. No. 47	
5	712-0287		Hex Nut 1/4-20 Thd.*	51	13012			Transaxle Support	
6	726-0106		Push Cap 1/4" Rod	52	736-0169			L-Wash. 3/8" Scr.*	
7	747-0157		Blade Clutch Lever	53	710-0216			Hex Scr. 3/8-16 x .57" Lg.*	
8	13950		Deck Clutch Control Brkt.	54	712-0798			Hex Nut 3/8-16 Thd.*	
9	710-0106		Hex Scr. 1/4-20 x 1.25" Lg.*	55	736-0169			L-Wash. 3/8" Scr.*	
10	735-0126		Rubber Wash. .330 I.D. x .87	56	732-0157			Ext. Spring—Brake Return	
11	736-0173		Fl-Wash. 1/4" I.D. x .75" O.D. x .057	57	732-0308			Ext. Spring—Deck Idler Return	
12	712-0107		Hex Cent. L-Nut 1/4-20 Thd.	58	712-0267			Hex Nut 5/16-18 Thd.*	
13	712-0267		Hex Nut 5/16-18 Thd.*	59	13833			Parking Brake Cam. Mtg. Brkt.	
14	736-0119		L-Wash. 5/16" Scr.*					Hex Nut 5/16-18 Thd.*	
15	710-0201		Hex Scr. 3/8-16 x .62" Lg.*	60	712-0267			Hex Scr. 5/16-18 x 1.50" Lg.*	
16	738-0143		Shld. Scr. 1/2" Dia. x .335 Lg. 3/8-16	61	710-0442			Hex Thd. Rolling Scr. 1/4-20 x .50" Lg.	
17	731-0483		Convoluted Conduit .50 I.D. x 4" Lg.	62	710-0599			Hex Scr. 3/8-16 x .75" Lg.*	
18	738-0155		Shld. Scr. 7/16 Dia. x .16" 5/16-18	63	710-0216			Hex Thd. Rolling Scr. 5/16-24 x .50" Lg.	
19	710-0376		Hex Scr. 5/16-18 x 1.00" Lg.*	64	710-0600			Hex Scr. 3/8-16 x 1.50" Lg.*	
20	13826		Idler Mtg. Brkt.—Deck	65	710-0344			Hitch Plate	
21	13893		Idler Brkt. Ass'y.	66	13813			Hex Thd. Rolling Scr. 5/16-24 x .75" Lg.	
22	712-0798		Hex Nut 3/8-16 Thd.*	67	710-0601			Hex Nut 5/16-24 Thd.*	
23	736-0105		Belleville Wash. 3/8" I.D. 4"-V" Idler Pulley	68	712-0123			Knob—Transaxle	
24	756-0293		Fl-Wash. 3/8" I.D.	70	720-0165			Side Panel Upper Frame—R.H.	
25	736-0300		Hex Scr. 3/8-16 x 1.25" Lg.*	71	13848			Side Panel Upper Frame—L.H.	
26	710-0342		Hairpin Cotter 5/16" Rod	72	13847			Hex Scr. 3/8-16 x .75" Lg.*	
27	714-0104		Spacer					Ext. L-Wash. #10 Scr.*	
28	748-0278		Hex Nut 5/16-18 Thd.*	73	710-0216			Hex Nut #10-24 Thd.*	
29	712-0267		L-Wash. 5/16" Scr.*	74	736-0147			Safety Switch (Deck)	
30	736-0119		Ext. Spring—Brake Rod	75	712-0121			Truss Mach. Scr. #10-24 x .50" Lg.*	
31	732-0260		Hex Cent. L-Nut 3/8-16 Thd.	76	725-0465			Shld. Scr. 7/16" Dia. x .16" Lg. 5/16-18	
32	712-0375		Disc Brake Caliper Ass'y.	77	710-0473			Hex Thd. Rolling Scr. 1/4-20 x .50" Lg.	
33	761-0178		Shld. Scr. 7/16" Dia. x .16" Lg. 5/16-18	78	738-0155			Washer	
34	738-0155		Parking Brake Cam Mtg. Brkt.	79	710-0599			Housing with Lever & Pin	
35	13833		Hex Nut 5/16-18 Thd.*					Anvil	
36	712-0267		L-Wash. 5/16" Scr.*	80	HU-20-9764			Pin, Adjuster	
37	736-0119		Hairpin Cotter 5/16" Dia.	81	HU-3770066			Nut	
38	714-0104		Ext. Spring—Deck Control	82	HU-16-13807			Pin, Actuator	
39	732-0384		Deck Control Pivot Brkt.	83	HU-39-13775			Backing Plate	
40	13887		Deck Control Rod	84	HU-37-13818			Lining	
41	747-0307		Hex Scr. 3/8-16 x 2.50" Lg.*	85	HU-39-13774			Shld. Bolt .50" Dia. x .25" Lg. 3/8-16 Thd.	
42	710-0937		Hub & Disc Ass'y. (For Brake)	86	HU-25-13808				
43	761-0142		Hi-Pro Key 3/16 x 3/4" Lg.	87	HU-24-13772				
44	714-0137		Hex Nut 3/8-16 Thd.*	88	738-0258				
45	712-0798		L-Wash. 3/8" Scr.*						
46	736-0169								

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size shown on parts list.

(462—Red Flake)
When ordering parts if color is important, use the appropriate color code listed above. (e.g. 12369—462—Red Flake)

140-830A

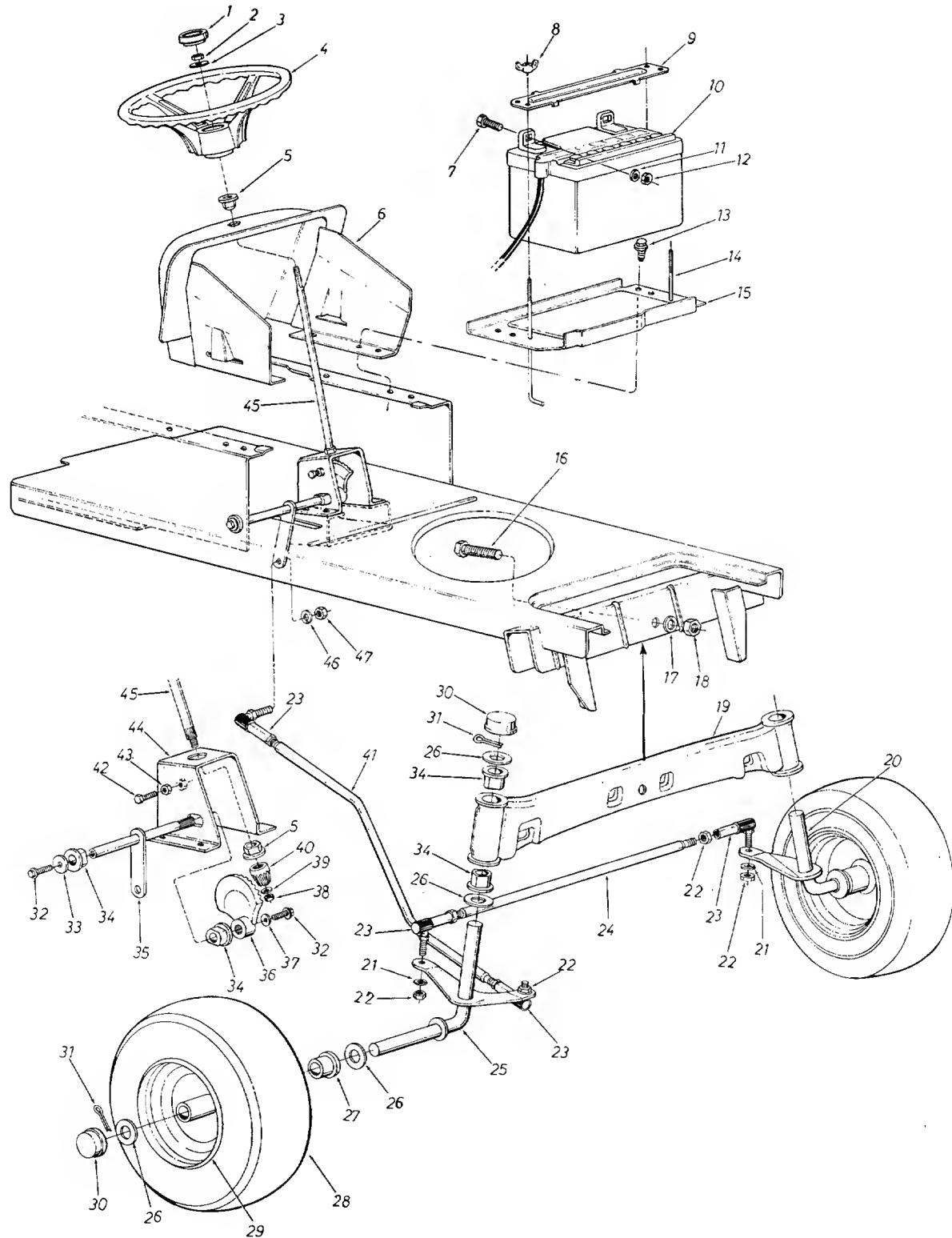


DRIVE SYSTEM

PARTS LIST FOR MODEL 140-830A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	736-0169		L-Wash. 3/8" Scr.*		32	712-0798		Hex Nut 3/8-16 Thd.*	
2	712-0798		Hex Nut 3/8-16 Thd.*		33	736-0169		L-Wash. 3/8" Scr.*	
3	13819		Belt Guard (Clutch Idler)		34	754-0245		"V"-Belt 1/2 x 59" Lg. (Kevlar)	
4	13815		Clutch Brkt. Ass'y.		35	711-0696		Stud 3/8-16 x 3.62" Lg. Special	
5	736-0169		L-Wash. 3/8" Scr.*		36	756-0324		Jack Shaft Ass'y.	
6	712-0798		Hex Nut 3/8-16 Thd.*		37	736-0119		L-Wash. 5/16" Scr.*	
7	732-0262		Ext. Spring (Drive Idler)		38	710-0198		Hex Sem Scr. 5/16-18 x .75" Lg.*	
8	720-0166		Knob (Parking Brake)		39	754-0244		"V"-Belt 1/2 x 40" Lg. (Kevlar)	
9	13872		Hand Brake Lever		40	741-0295		Nyliner 5/8" I.D. x .88" Lg.	
10	714-0117		Hairpin Cotter 5/8" Dia.		41	732-0153		Ext. Spring (Jack Shaft)	
11	747-0304		Brake Rod		42	710-0599		Hex Thd. Rolling Scr. 1/4-20 x .50" Lg.	
12	13832		Parking Brake Cam		43	13871		Clutch-Idler Horn Ass'y.	
13	736-0275		Fl-Wash. 5/16" Scr.		44	715-0108		Spring Pin Spiral 1/4" Dia. x 1.00" Lg.	
14	712-0267		Hex Nut 5/16-18 Thd.*		45	757-0300		Parking Brake Link	
15	736-0275		Fl-Wash. 5/16" Scr.		46	13822		Idler Mtg. Brkt.—Drive	
16	714-0145		Hairpin Cotter 3/8" Rod		47	756-0293		4" "V"-Idler Pulley	
17	714-0474		Cotter Pin 1/8" Dia. x 1.00" Lg.*		48	736-0300		Fl-Wash. 3/8" I.D.	
18	13859		Clutch Rod Brg. Brkt.		49	710-0347		Hex Scr. 3/8-16 x 1.75" Lg.*	
19	13856		Clutch—Brake Pedal Ass'y.		50	736-0169		L-Wash. 3/8" Scr.*	
20	712-0375		Hex Cent. L-Nut 3/8-16 Thd.*		51	710-0216		Hex Scr. 3/8-16 x .75" Lg.*	
22	756-0328		Engine Pulley 4.75 & 5.56		52	756-0332		"V"-Pulley 7.0" O.D. (Transaxle)	
24	712-0375		Hex Cent. L-Nut 3/8-16 Thd.*		53	736-0169		L-Wash. 3/8" Scr.*	
25	714-0115		Cotter Pin 3/32" Dia. x .75" Lg.*		54	710-0180		Hex Scr. 3/8-24 x .75" Lg.*	
26	711-0198		Pivot Bushing		55	13829		Belt Guard Ass'y.	
27	747-0306		Brake Cam Rod						
28	735-0196		Foot Pad						
29	714-0145		Hairpin Cotter 3/8" Rod						
30	736-0101		Fl-Wash. 3/8" I.D. x 1.00" O.D. x .030						
31	13823		Jack Shaft Mtg. Brkt. Ass'y.						

140-830A



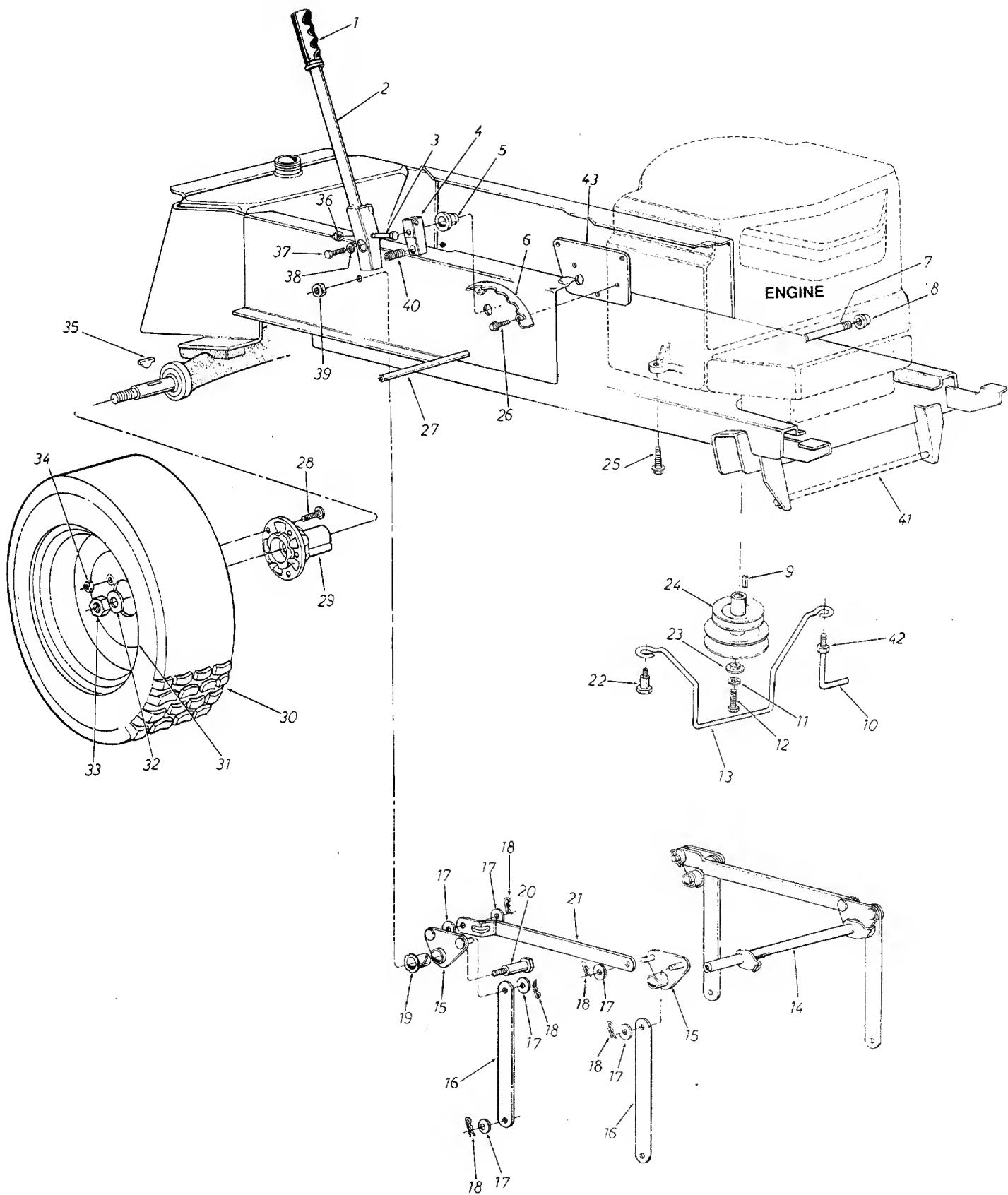
STEERING

PARTS LIST FOR MODEL 140-830A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	731-0220		Steering Wheel Cap		28	734-1006		Front Wheel Ass'y. Comp.	
2	712-0158		Hex Cent. L-Nut 5/16-18 Thd.		29	734-0787		Front Wheel Rim Only	
3	736-0275		Fl-Wash. 5/16" I.D. x 1.00" O.D. x .057			734-0526		Front Wheel Tire Only 16 x 6.50	
4	731-0356		Steering Wheel			734-0255		Air Valve	
5	741-0225		Plastic Hex Bearing 5/8" I.D.		30	731-0484		Dust Cover	
6	13843		Dash Panel Ass'y.		31	714-0121		Cotter Pin 5/32" Dia. x 1.00" Lg.*	
7	710-0258		Hex Scr. 1/4-20 x .62" Lg.		32	710-0180		Hex Scr. 3/8-24 x .75" Lg. Grade 5	
8	712-0113		Wing Nut Plastic 1/4-20 Thd.					Fl-Wash. 3/8 I.D. x 1.25 O.D. .090	
9	12614		Battery Hold Down		33	736-0133		Flange Double "D" Brg. .753 I.D.	
10	725-0453		12-V Battery					Steering Arm Shaft Ass'y.	
11	736-0329		L-Wash. 1/4" Scr.*		35	12749		Side Gear—Steering	
12	712-0287		Hex Nut 1/4-20 Thd.*		36	748-0236		Bell-Wash. 3/8" I.D.	
13	710-0599		Hex Thd. Rolling Scr. 1/4-20 x .50" Lg.		37	736-0105		Hex Cent. L-Nut 5/16-24 Thd.	
14	711-0222		Battery Hold Down Rod		38	712-0237		Fl-Wash. 5/16" I.D. x .62 O.D. .059	
15	13379		Battery Plate		39	736-0264		Pinion Gear—Steering	
16	710-0533		Hex Scr. 5/8-18 x 2.50" Lg.*		40	748-0237		Drag Link	
17	736-0158		L-Wash. 5/8" Scr.*		41	747-0302		Hex Nylon Scr. 3/8-16 x 1.25" Lg.	
18	712-0923		Hex Cent. L-Nut 5/8-18 Thd.		42	710-0670		Hex Nut 3/8-16 Thd.*	
19	13865		Front Pivot Bar Ass'y.					Steering Gear Sup. Ass'y.	
20	13839		Front Axle Ass'y.—L.H.		43	712-0798		Steering Shaft	
21	736-0169		L-Wash. 3/8" Scr.*		44	12850		L-Wash. 3/8" Scr.*	
22	712-0241		Hex Nut 3/8-24 Thd.*		45	738-0317		Hex Nut 3/8-24 Thd.*	
23	723-0156		Ball Joint Ass'y.		46	736-0169			
24	747-0301		Tie Rod		47	712-0241			
25	13838		Front Axle Ass'y.—R.H.						
26	736-0316		Fl-Wash. .780 I.D. x 1.59 O.D.						
27	741-0225		Flange Bearing						

741-0312

140-830A



DECK LINKAGE

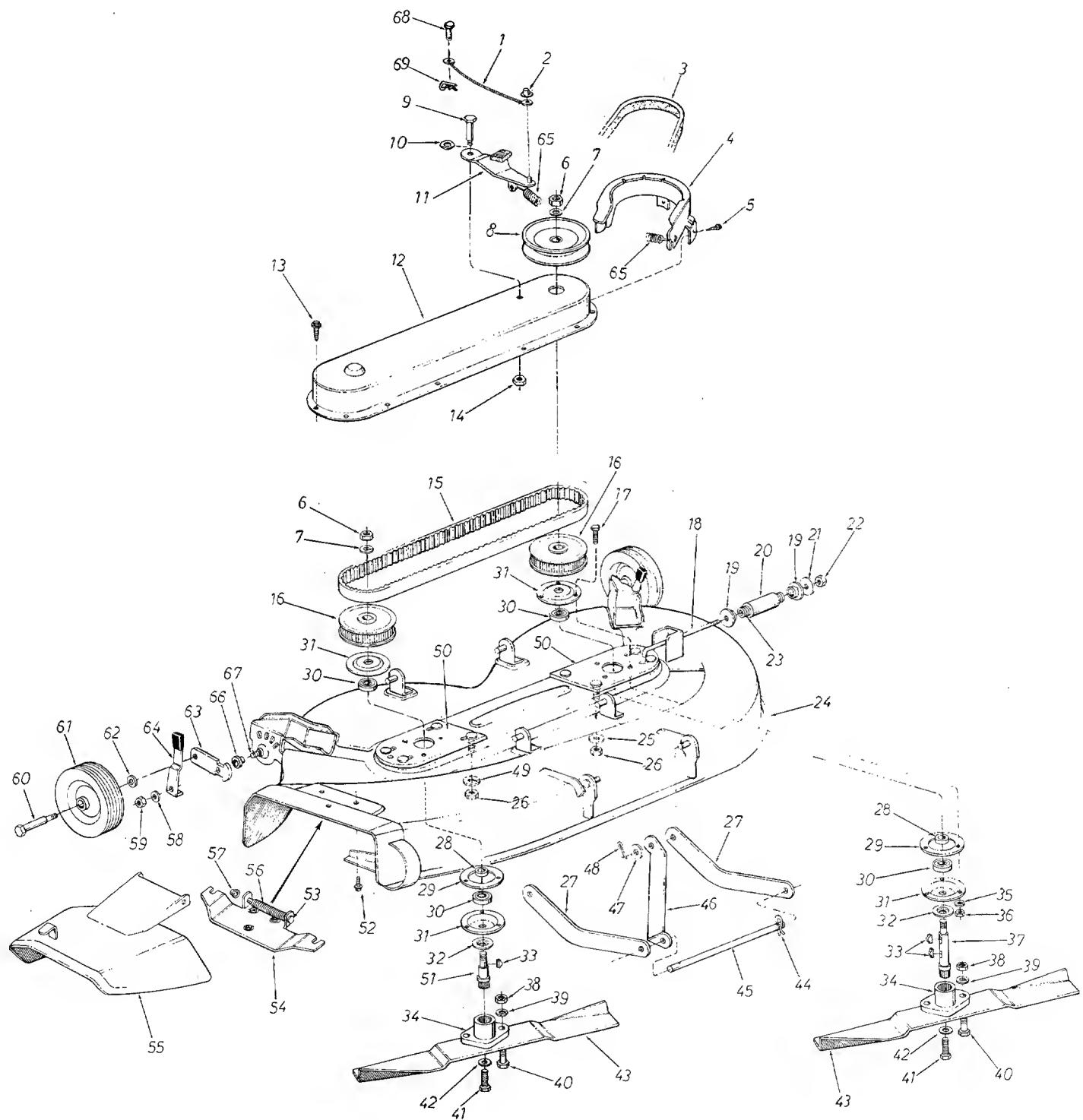
PARTS LIST FOR MODEL 140-830A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	720-0157		Grip	24	756-0328			Two-Step Engine Pulley 4.75" & 5.56	
2	13884		Lift Handle Ass'y.	25	710-0502			Hex Wash. Hd. Scr. 3/8-16 x 1.25" Lg.	
3	710-0442		Hex Scr. 5/16-18 x 1.50" Lg.*	26	710-0600			Hex Thd. Rolling Scr. 5/16-24 x .50" Lg.	
4	748-0274		Lift Shaft Drive	27	738-0435			Running Board Rod	
5	741-0225		Plastic Hex Brg. 5/8" I.D.	28	710-0617			Rd. Hd. Ribbed Neck Scr. 3/8-24 x 1.00" Lg. (Service Only)	
6	13873		Index Brkt. Deck Lift	29	719-0236			Rear Wheel Hub Ass'y. with Studs	
7	737-0164		Pipe Nipple 3/8-18 Npt.	30	734-0795			Rear Wheel Ass'y. Comp.	
8	737-0143		Pipe Cap 3/8-18 Npt.	31	734-0785			Rear Wheel Rim Only	
9	714-0118		Sq. Key 1/4" x 1/4" x 1.50" Lg.	32	748-0160			Rear Wheel Tire Only 23 x 8.50	
10	747-0216		Belt Guard Lock Pin	33	712-0288			Spacer	
11	736-0171		L-Wash. 7/16" Scr.*	34	712-0193			Hex Ins. L-Nut 3/4-16 Thd.	
12	710-0757		Hex Scr. 7/16-20 x 1.50" Lg.	35	714-0146			Hex Cone Nut 3/8-24 Thd.	
13	747-0299		Belt Guard	36	712-0158			#27 Woodruff Key 1/4 x 2.12 H.T.	
14	13889		Lift Shaft Ass'y.	37	710-0237			Hex Cent. L-Nut 5/16-18 Thd.	
15	13895		Lift Pivot Brkt. Ass'y.	38	736-0119			Hex Scr. 5/16-24 x .62" Lg.*	
16	13791		Link (Deck)	39	712-0181			L-Wash. 5/16" Scr.*	
17	736-0192		Fl-Wash. 1/2" I.D. x 1.00' O.D. x .090	40	732-0369			Hex Top L-Nut 3/8-16 Thd.	
18	714-0145		Cotter Pin 1/8" Dia. x .75" Lg.	41	738-0392			Compression Spring	
19	741-0295		Nyliner 5/8" I.D. x .88" Lg.	42	712-0123			Deck Connecting Rod	
20	738-0445		Shld. Scr. 5/8" Dia. x .96" Lg. 3/8-16	43	14170			Hex Nut 5/16-24 Thd.*	
21	13790		Connecting Link					Index Brkt. Reinforcement Plate	
22	738-0296		Shld. Scr. .437 Dia. x .268 Lg. 5/16-18						
23	748-0277		Step Wash. (Special)						

The engine is not under warranty by the mower manufacturer. If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines — Gasoline."



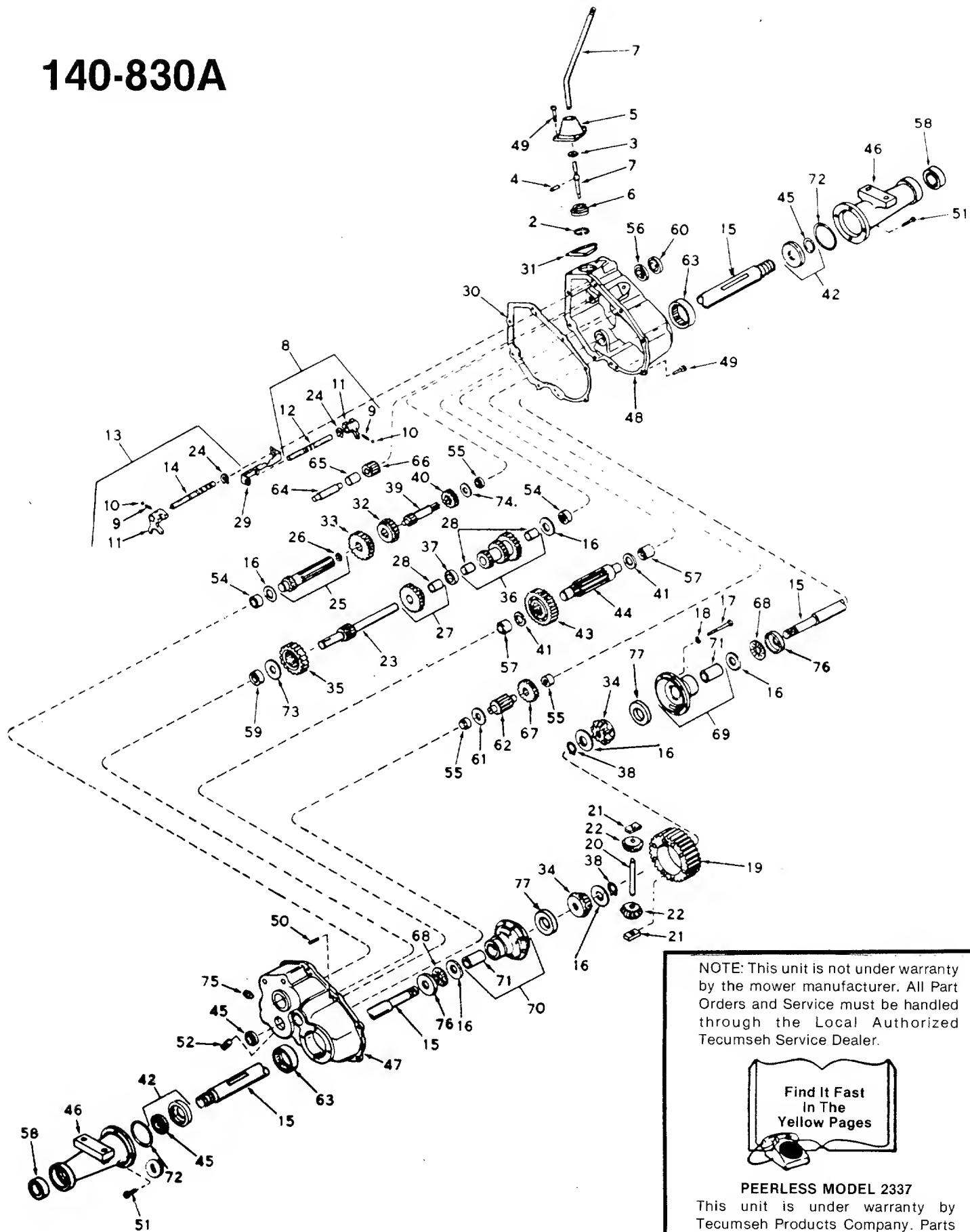
190-935A (OPTIONAL 44" DECK)



OPTIONAL
PARTS LIST FOR MODEL 190-935A 44" DECK

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	746-0237		Brake Cable Ass'y. (Deck)		37	738-0436		Blade Spindle—L.H.	
2	726-0106		Push Cap 1/4" Stud		38	712-0123		Hex Nut 5/16-24 Thd.*	
3	754-0230		"V"-Belt 1/2" x 56" Lg.		39	736-0119		L-Wash. 5/16" Scr.*	
4	13910		Belt Guard (Deck)		40	710-0117		Hex Scr. 5/16-24 x 1.00" Lg.	
5	710-0599		Hex Thd. Rolling 1/4-20 x .50" Lg.		41	710-0180		Grade 5	
6	712-0242		Hex Jam Nut 5/8-11 Thd.		42	736-0217		Hex Scr. 3/8-24 x .75" Lg.	
7	736-0317		Belle. Wash. 5/8" I.D. x 1.25 O.D.		43	742-0125		Grade 5	
8	756-0329		Deck Drive "V"-Pulley		44	714-0149		L-Wash. 3/8" Scr. H.D.	
9	738-0140		Shld. Scr. .437" Dia. x .180" Lg. 5/16-18		45	738-0392		22" Blade	
10	736-0141		Wave Wash. 7/16" Scr.		46	13867		Hairpin Cotter	
11	13908		Spindle Brake Arm Ass'y.		47	736-0192		Deck Connecting Rod	
12	13874		Belt Cover Ass'y.		N	48	714-0111	Diagonal Brace	
13	710-0599		Hex Thd. Rolling Scr. 1/4-20 x .50" Lg.		49	736-0105		Fl-Wash. 1/2" I.D. x 1.00" O.D. x .090	
14	712-0158		Hex Cent. L-Nut 5/16-18 Thd.		50	13868		Cotter Pin 3/32" Dia. x 1.00" Lg.*	
15	754-0246		Timing Belt #1440-8M-20		51	738-0437		Belle. Wash. 3/8" Scr.	
16	756-0334		Sprocket Pulley Ass'y.		52	710-0599		Spindle Plate Ass'y.	
17	710-0322		Hex Sems Scr. 5/16-18 x 1.00" Lg.*		53	711-0571		Blade Spindle—R.H.	
18	710-0754		Adjustment Scr.		54	11396		Hex Wash. Hd. Self-Tap Scr. 1/4-20 x .50" Lg.	
19	738-0347		Shld. Spacer (Special)		55	11633		Hinge Pin	
20	750-0455		Spacer—Adj. Scr.		56	732-0261		Grass Catcher Adapter Plate	
21	736-0231		Fl-Wash. 5/16" I.D. x 1.125" O.D.		57	726-0106		Chute Cover Ass'y.	
22	712-0267		Hex Nut 5/16-18 Thd.*		58	736-0219		Torsion Spring	
23	732-0377		Compression Spring		59	712-0181		Push Nut 1/4" Rod	
24	13861		44" Deck Ass'y.		60	738-0455		Belleville Wash.	
25	736-0105		Belleville Wash. 3/8" I.D.		61	734-0974		Hex Nut 3/8-16 Thd.*	
26	712-0241		Hex Nut 3/8-24 Thd.*		62	736-0105		Shld. Scr. .498 Dia. x 1.53" Lg. 3/8-16	
27	13866		Deck Stabilizer		63	10937		Wheel Ass'y. Comp. 6" (Deck)	N
28	750-0456		Spacer		64	14082		Belleville Wash. 3/8" I.D.	
29	09164		Reinforcement Plate		65	732-0118		Wheel Pivot Bar	
30	741-0919		Ball Bearing		66	748-0279		Spring Lever Ass'y. w/Knob	
31	08253		Bearing Housing		67	710-0342		Extension Spring	
32	13703		Bearing Shield		68	711-0701		Shld. Spacer	
33	714-0126		#9 Hi-Pro Key 3/16 x 3/4" Dia.		69	714-0104		Hex Scr. 3/8-16 x 1.00" Lg. Grade 5	
34	748-0235		Blade Adapter 3/4" Spindle					Clevis Pin 1/4" Dia. x 1.00" Lg.	
35	736-0119		L-Wash. 5/16" Scr.*					Hairpin Cotter 1/4" Dia.	
36	712-0267		Hex Nut 5/16-18 Thd.*						

140-830A



NOTE: This unit is not under warranty by the mower manufacturer. All Part Orders and Service must be handled through the Local Authorized Tecumseh Service Dealer.



PEERLESS MODEL 2337

This unit is under warranty by Tecumseh Products Company. Parts and Service are available through all Tecumseh, Lauson Power Products Service Dealers. Check the "Yellow Pages" of your telephone directory under "Engines—Gasoline."

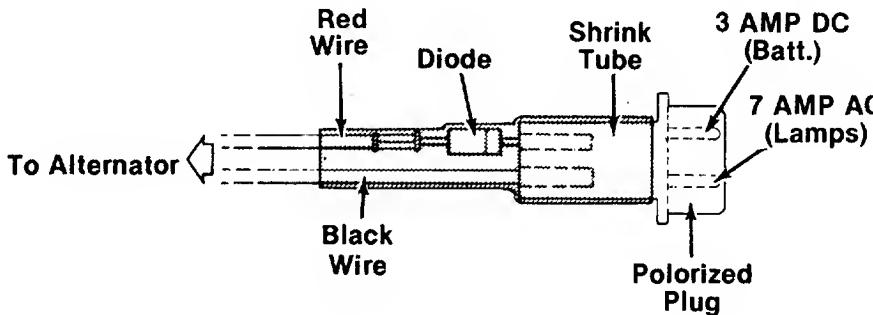
TRANSAXLE MODEL 2337

PARTS LIST FOR TRANSAXLE MODEL 2337 (FOR 140-830A)

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
2	PE-792016	Ring, Snap	40	PE-778024	Spur Gear, Input Shaft
3	PE-792001	Ring, Quad	41	PE-780052	Washer, Thrust
4	PE-792049	Pin, Roll	42	PE-788021	Seal and Retainer Ass'y., Oil (Incl. No. 45)
5	PE-784093	Housing, Shift Lever	43	PE-778036	Gear, Output
6	PE-784094	Keeper, Shift Lever	44	PE-776028	Pinion, Output
7	PE-3471-P1	Lever, Shift*	45	PE-788008	Seal, Oil
8	PE-784054	Rod Ass'y., Shift (Incl. Nos. 9 thru 12 and 24)	46	PE-782025	Housing, Axle
9	PE-792003	Spring	47	PE-772016A	Cover Ass'y., Transaxle (Incl. Nos. 54, 55, 57, 59 and 63)
10	PE-792004	Ball, Steel	48	PE-770012	Case Ass'y., Transaxle (Incl. Nos. 54, 55, 57 and 63)
11	PE-784004	Fork, Shifter	49	PE-792007	Scr., Socket Hd. Cap 1/4-20 x 3/4
12	PE-784055	Rod, Shifter (3rd and 4th)	50	PE-786026	Pin, Dowel
13	PE-784056	Rod Ass'y., Shift (Incl. Nos. 9, 10, 11, 14 and 24)	51	PE-792037	Scr., Hex Hd. Sems, 5/16-18 x 1
14	PE-784057	Rod, Shifter (Low)	52	PE-792019	Plug, Magnetic Drain
15	PE-774361	Axle	54	PE-780049	Bearing, Needle
16	PE-780042	Washer, Thrust	55	PE-530105	Bearing, Needle
17	PE-792005	Scr. Hex Hd. Cap 1/4-20 x 2 1/2	56	PE-780024	Bearing, Ball
18	PE-792006	L-Wash. 1/4 "	57	PE-780047	Bearing, Needle
19	PE-778033A	Gear, Ring	58	PE-780050	Bearing, Ball
20	PE-786019	Pin, Drive	59	PE-780046	Bearing, Needle
21	PE-786027	Block, Drive	60	PE-788025	Seal, Oil
22	PE-778094	Pinion, Bevel	61	PE-780001	Washer
23	PE-776029A	Shaft and Gear, Brake	62	PE-776031	Shaft and Pinion
24	PE-792017	Ring, Snap	63	PE-780048	Bearing, Needle
25	PE-776026	Shaft and Brg. Ass'y., Pinion (Incl. No. 26)	64	PE-776030	Shaft, Reverse Idler
26	PE-780018	Bearing, Needle	65	PE-786025	Spacer, Reverse Idler
27	PE-778034	Gear Cluster Ass'y. (Incl. No. 28)	66	PE-778016	Idler, Reverse
28	PE-780053	Bushing	67	PE-778038	Spur Gear (22 Teeth)
29	PE-784074	Stop, Shifter	68	PE-780039	Bearing, Thrust
30	PE-788023	Gasket, Case and Cover	69	PE-774072A	Carrier Ass'y., Differential (Incl. No. 71)
31	PE-788022	Gasket, Shifter Lever Housing	70	PE-774071A	Carrier Ass'y., Differential (Incl. No. 71)
32	PE-778019	Gear, Shifting (3rd and 4th)	71	PE-780041	Bushing
33	PE-778020	Gear, Shifting (1st, 2nd and Rev.)	72	PE-788024	"O" Ring
34	PE-778095	Gear, Bevel	73	PE-780007	Washer, Thrust
35	PE-778037	Gear, Idler	74	PE-780051	Washer, Thrust
36	PE-778035	Gear Cluster Ass'y. (Incl. No. 28)	75	PE-792010	Plug, Pipe
37	PE-786024	Spacer	76	PE-780075	Race, Thrust
38	PE-792018	Ring, Snap	77	PE-780107	Washer
39	PE-776175	Shaft, Input			

*Shift lever is not shipped with transaxle. Order separate.

TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

TROUBLE	LOOK FOR	REMEDY
Engine will not crank	Battery installed incorrectly	The battery must be installed with the negative, identified at the terminal post by (Neg, N or -) grounded. The positive (Pos, P or +) attaches to the large cable from the solenoid. The small red wire from the fuse holder or circuit breaker is also attached to the positive terminal.
	Blow fuse or circuit breaker	Replace fuse with 7½ amp. fuse ¼ x 1¼" lg. Circuit breaker will reset itself when it cools off. Fuses or circuit breakers seldom open or fail without a reason. The problem must be corrected. Check for loose connections in the fuse holder. Replace fuse holder if necessary. A dead short may be in the cranking or charging circuit where the insulation may have rubbed through and exposed the bare wire. Replace the wire or repair with electrician's tape if the wire strands have not been damaged. Note: Look for a wire pinched between body panels, burned by the exhaust pipe or muffler or rubbed against a moving part.
	Battery is dead or weak	<p>Use a hydrometer to check the condition of the battery. The Specific Gravity (s.g.) should be 1.265 at 80°F. (1.215 s.g. minimum needed for cranking engine). The reason for the battery failing must be determined. (1) Defective battery. Battery will not accept or hold a full charge. (2) Short circuit. Check for grounded wire. (3) Charging system not working, either engine alternator or trickle charger.</p> <p>Trickle Charger. Check with multimeter. Charger 725-0578—input 120 V A.C., no load output 13.5 V D.C., rated load current 1 amp. Charger 725-0507—input 120 V A.C., no load output 17.4 V D.C., rated load current 1/2 amp.</p> <p>Alternator (dual or single circuit) The charging system is an alternator located under the flywheel. It is unregulated and rated 3 amp. at 3600 r.p.m. A diode (rectifier) is located in the output lead just before the wire harness plug on the engine side.</p>
		
	Mechanical failure. (Wires and switches)	The interlock system includes two mechanical activated switches which are wired in series in the circuit used to energize the starter solenoid. While testing the interlock system, you will make the mower temporarily unsafe by permitting the engine to be started with the blade and clutch engaged. WARNING: While testing, disengage the clutch, shut off the blade control, set the parking brake and place the gear shift lever in neutral. Attach a wire (minimum 18 gauge) to the positive terminal of the battery and touch the other end to the small terminal on the solenoid. If the engine does not crank: (1) There is a loose connection or poor ground. (2) The solenoid may be bad. The solenoid can be checked by using a heavy wire (#8 gauge minimum) and jumping between the two large terminals. If the engine cranks, the solenoid is bad. (3) If the engine does not crank when you jump the solenoid, have the starter motor tested by an authorized engine dealer. If the engine does crank, the problem is with one of the safety switches, ignition switch or the wire between the fuse holder (or circuit breaker) and the small terminal on the solenoid. Note: Look for a poor connection at the switches or a defective switch. Replace if necessary.
	Throttle or choke not in position	Check owner's guide for correct position for throttle control and choke (if separate control) for starting.

TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

TROUBLE	LOOK FOR	REMEDY
	No spark to spark plug	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have engine repaired at authorized engine service dealer. Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground the spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.
	No fuel to the carburetor	Gasoline tank empty. Fill. Fuel valve shut off. Open valve. Valve is located either at the bottom of the fuel tank or on the carburetor. Fuel line plugged. Remove and clean.
	Air filter dirty	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.
Engine smokes	Engine loses crankcase vacuum	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.
Excessive vibration	Bent or damaged blade spindle	Stop engine immediately. Check all pulleys, blade spindles, blade adapters, keys and bolts for tightness and damage. Tighten or replace any damaged parts.
	Bent blade	Stop engine immediately. Replace damaged blade. Only use original equipment blades.
Mower will not discharge grass or leaves uncut strips	Engine speed low Transmission selection Blades short or dull	Throttle must be set between 3/4 and full throttle. Use lower transmission gear. The slower your ground speed the better the quality of cut. Sharpen or replace blades (uncut strip problem only).

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service for all MTD manufactured power equipment are available through the authorized service firms listed below. All orders should specify the model number of your unit, parts number, description of parts and the quantity of each part required.

ALABAMA	BIRMINGHAM
Auto Electric & Carburetor Co.	2625 4th Ave. S. 35233
ARKANSAS	FORT SMITH
Mity Mite Motors, Inc.	4515 South 16th Street 72901
	NORTH LITTLE ROCK
Sutton's Lawn Mower Shop	Rt. 4 Box 368. 72117
CALIFORNIA	PORTERVILLE
Billious	75 North D Street. 93257
Lawn Mower Supply Co.	25608 E. Baseline 92410
J.W. Jewett Co.	SAN FRANCISCO 981 Folsom St. 94107
COLORADO	DENVER
South Denver Lawn Equip.	527 West Evans. 80223
FLORIDA	JACKSONVILLE
Radco Distributors	2403 Market St. 32206
Small Eng. Dist.	OPA LOCKA 2351 N.W. 147th St. 33054
GEORGIA	EAST POINT 2834 Church St. 30344
East Point Cycle & Key.	LYONS
ILLINOIS	Keen Edge Co. 8615 Ogden Ave. 60534
INDIANA	ELKHART
Parts & Sales Inc.	2101 Industrial Pkwy. 46514
IOWA	DUBUQUE
Power Lawn & Garden Equip.	2551 J.F. Kennedy. 52001
LOUISIANA	NEW ORLEANS
Suhren Engine Co.	8330 Earhart Blvd. 70118
MARYLAND	TAKOMA PARK
Center Supply Co.	6867 New Hampshire Ave. 20012
MASSACHUSETTS	SPRINGFIELD
Morton B. Collins Co.	300 Birnie Ave. 01107
MICHIGAN	LANSING
Lorenz Service Co.	2500 S. Pennsylvania. 48910
Power Equipment Dist.	MOUNT CLEMENS 36463 South Gratiot. 48043
MINNESOTA	HOPKINS
Hance Distributing Inc.	420 Excelsior Ave. W. 55343
	ST. PAUL
Power Tools Inc.	3771 Sibley Memorial Hwy. 55122
MISSISSIPPI	BILOXI
Biloxi Sales & Service, Inc.	506 Caillavet St. 39533
MISSOURI	KANSAS CITY
Automotive Equip. Service	3117 Holmes St. 64109
	ST. JOSEPH
Ross-Frazier Supply Co.	8th and Monteray. 64503
	ST. LOUIS
Henzler, Inc.	2015 Lemay Ferry Rd. 63125
NEW JERSEY	BELLMAWR
Lawnmower Parts Inc.	717 Creek Rd. 08030
	RUTHERFORD
Feld Distributor	28 Glen Rd. 07070
NEW YORK	CARTHAGE
Gamble Dist., Inc.	West End Ave. 13619

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline**, Briggs & Stratton or Tecumseh Lauson.

SYRACUSE	
GTP Leisure Products Inc.	420 Marcellus St. 13204
NORTH CAROLINA	GOLDSBORO
Smith Hardware Co.	515 N. George St. 27530
	GREENSBORO
Dixie Sales Company	327 Battleground Ave. 27402
OHIO	CARROLL
Stebe's Mid-State Mower Supply	Box 366-71 High St. 43112
	CLEVELAND
Bleckrie, Inc.	7900 Lorain Ave. 44102
National Central.	687 Seville Rd. 44281
	YOUNGSTOWN
Burton Supply Co.	1301 Logan Ave. Box 929. 44501
OKLAHOMA	ADA
Ada Auto Supply	301 E. 12th St. 74820
	MUSKOGEE
Victory Motors, Inc.	605 S. Cherokee. 74401
	OKLAHOMA CITY
Forest Sales Inc.	1039 NW 63rd St. 73116
OREGON	PORTLAND
Kenton Supply Co.	8216 N. Denver Ave. 97217
PENNSYLVANIA	CHESTER
Stull Equipment Corp.	742 W. Front St. 19013
	HARRISBURG
EECO Inc.	4021 N. 6th St. 17110
	PHILADELPHIA
Thompson Rubber Co.	5222-24 N. Fifth St. 19120
	PITTSBURGH
Bluemont Co.	11125 Frankstown Rd. 15235
TENNESSEE	KNOXVILLE
Master Repair Service.	2000 Western Ave. 37921
	MEMPHIS
Memphis Cycle & Supply Co.	421 Monroe Ave. 38103
American Sales & Service, Inc.	1922 Lynbrook. 38116
TEXAS	DALLAS
Marr Brothers, Inc.	423 E. Jefferson. 75203
	FORT WORTH
Woodson Sales Corp.	1702 N. Sylvania. 76111
	HOUSTON
Bullard Supply Co.	2409 Commerce St. 77003
	SAN ANTONIO
Catto & Putty, Inc.	414 Live Oak. 78298
UTAH	SALT LAKE CITY
A-1 Engine & Mower Co.	437 E. 9th St. 84111
VERMONT	BURLINGTON
Vermont Hdwe. Co. Inc.	180 Flynn Ave. 05401
VIRGINIA	RICHMOND
RBI Corp.	963 Myers St. 23260
WASHINGTON	SEATTLE
Bailey's Inc.	1414 14th Ave. 98102
WEST VIRGINIA	CHARLESTON
Young's, Inc.	233 Virginia St., E. 25301
WISCONSIN	APPLETON
Automotive Supply Co.	123 S. Linwood Ave. 54911

WARRANTY PARTS AND SERVICE POLICY

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES

1. Replacement of Missing Parts on new equipment.
2. Replacement of Defective Parts within the warranty period.
3. Repair of Defects within the warranty period.

All claims MUST be substantiated with the following information:

1. Model Number of unit involved.
2. Date unit was purchased or first put into service.
3. Date of failure.
4. Nature of failure.